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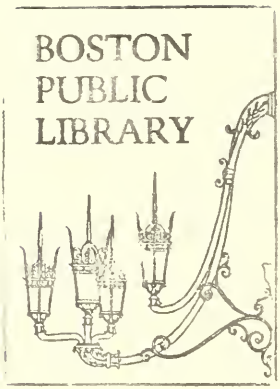
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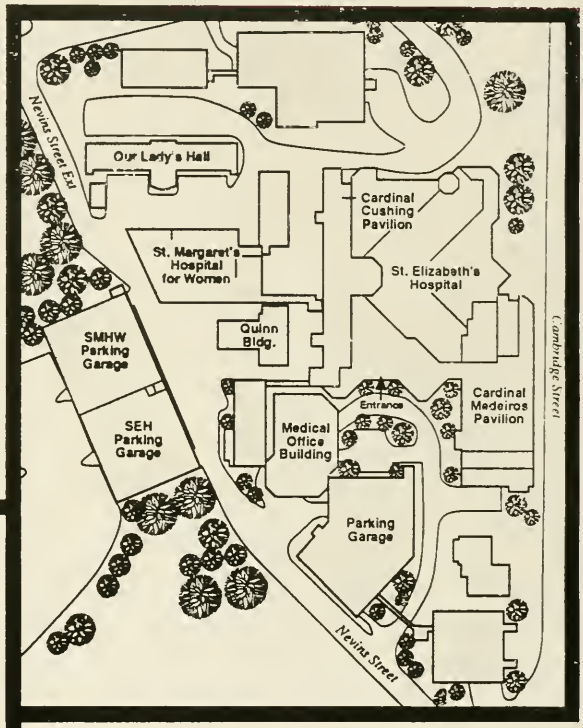
ST. ELIZABETH'S HOSPITAL OF BOSTON

MASTER PLAN UPDATE



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March, 1990

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ST. ELIZABETH HOSPITAL OF BOSTON
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PREFACE

This amendment is the second update to the Master Plan of St. Elizabeth's Hospital of Boston, filed in May 1987 by the Hospital Board of Trustees. The first update was filed with the City by St. Elizabeth's Hospital in October, 1988.

Copies of the original Master Plan and 1988 update were filed with the Office of the Mayor, Office of Neighborhood Services, Boston Redevelopment Authority, and PZAC and IPOD Committees.

In addition, individual copies were mailed to community, neighborhood, and elected leaders throughout the Allston-Brighton community. Copies may be read at any of the offices listed above, or can be read by appointment at the Office of Community Health Services, St. Elizabeth's Hospital, (617)789-2441, at mutually convenient times.

Please note that this amendment is not a new master plan and should be read only as an update to the original filing and the October, 1988 update. However, this plan reflects all specific development activity anticipated through 1992 as well as long-term planning for the St. Elizabeth's Hospital campus through 1997.

ST. ELIZABETH'S HOSPITAL OF BOSTON
MASTER PLAN UPDATE

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2.0 UPDATE OF FACILITIES

This section of the Master Plan Update discusses several master plan issues. There have either been modifications to the programs for these facilities or additional information available since the Master Plan update filed in 1988.

2.1 Status Report on the New Energy Recovery Facility

Since the 1987 Master Plan was filed, the hospital has received approval to pursue a trash to energy incinerator system which would generate heat for the hospital system.

With the relocation of SMHW to the campus, the size and location of the Energy Recovery Facility will need to be reassessed. The hospital has already begun examining how the additional quantity of waste will affect the sizing and efficiency of the system, and are considering alternate locations for the system.

Once the hospital has more detailed information regarding SMHW, it will develop its final proposal.

2.2 Status of Keith Chapel

As was stated in the 1988 Master Plan Update, the Keith Chapel building will be replaced by the new facility for SMHW. Throughout the environmental review processes with the state (DEIR) and city (PNF), the hospital has presented information on the chapel. The hospital has also provided information directly to the Massachusetts Historical Commission (MHC) and the Boston Landmarks Commission (BLC). Both MHC and BLC have indicated that the building does not meet criteria for landmark or historic register designation.

2.3 The Parking Garages

2.3.1 Description

As stated in the 1988 Master Plan Update, the present SEH four-level, 257-car parking garage will be supplemented with a 330-car parking facility, on 3 levels, on a portion of the hill property owned by St. Elizabeth's Hospital Foundation, located on the

1.0 INTRODUCTION

St. Elizabeth's Hospital (SEH) of Boston filed its original Master Plan with the City of Boston in May 1987, reflecting a long-term, future horizon (through 1997) of SEH plans, and a short-term (through 1992) summary of specific actions that the hospital was planning with annual updates anticipated. The first annual update to this Master Plan was presented to the City and Allston/Brighton neighborhood in October 1988.

This document represents the second annual Master Plan update. St. Elizabeth's Hospital of Boston (SEH) has made progress during the past twelve months on a number of significant master plan issues. These include St. Margaret's Hospital for Women's (SMHW) relocation to the SEH campus, parking and traffic and pedestrian circulation improvements, and the hospital's dialogue with the Brighton community and neighborhood associations.

Since the original relocation proposal was outlined in the Determination of Need application filed by SMHW with the Massachusetts Department of Public Health in 1988, a revised program has been developed by the hospital, reducing the proposed beds from 132 to 98, and reducing the proposed parking spaces in the new St. Elizabeth's/St. Margaret's garage from 400 to 330.

During the next twelve months, SEH will work towards obtaining the necessary approvals to begin construction of the new SMHW facility and its new 330-space parking facility to serve the needs of the Medical Office Building (to be occupied in 1990) and patients and staff of the relocated SMHW facility.

property line between the two campuses, directly behind the Keith Chapel and the Service and Quinn Buildings. As reported, the facility will provide parking for SEH's Medical Office Building and SMHW.

In addition, there are surface lots available to staff, patients, and visitors. The St. Elizabeth's Hospital Foundation lot (and contracted off-site lots) provide additional parking for hospital staff.

Appendix 2 contains the Transportation Access Plan which addresses parking demand and supply in detail.

2.3.2 Rate Structure of Parking Garages and Lots

Adequate parking is provided for all existing uses on the SEH campus. The main parking facilities located at the SEH campus have different parking rate structures for garage or lot, and employee or visitor parking. The main campus parking lots are available to visitors and have the same rate structure as the parking garage which is used by both employees and visitors. Table II-1 lists the rate structure for both the visitor lot and parking garage.

Parking for SEH employees is located in the garage, SEH Foundation property and at contracted off-site locations. Employee rates at the garage are $11 per week ($572/year) and $24 per year for parking at the SEH Foundation property and other off-site locations.

During construction of the proposed 330-space parking garage, temporary parking arrangements will be implemented. Available parking supply will meet or exceed parking demand. To make effective use of campus parking, the parking rates will be structured to discourage long-term parking by employees in the existing garage and campus lots, keeping those spaces available to visitors and patients. The proposed rates at the garage and patient/visitor campus lots will be increased as listed in Table II-2.

2.4 Rosemary Quinn Building

In the 1988 Master Plan Update it was stated that the Quinn building would be removed for the SMHW project. The project as proposed today has been revised and reduced in scope. The SMHW facility will not require removal of the Quinn building, which will continue to be used as it is today.

TABLE II-1
CURRENT PARKING RATES FOR VISITORS LOTS AND GARAGE
ST. ELIZABETH'S HOSPITAL

Time	Cost
1 hour	$ 2.00
2 hours	3.00
3 hours	4.00
4 hours	5.00
6 hours	6.00
8 hours	6.00
Maximum	$6.00

TABLE II-2
FUTURE PARKING RATES
ST. ELIZABETH'S HOSPITAL

Time	Cost
1 hour	$ 2.00
2 hours	3.00
3 hours	4.00
4 hours	6.00
6 hours	8.00
8 hours	10.00
Maximum	$12.00

2.5 Medical Office Building

The construction of the SEH Medical Office Building is near completion. It is expected that physicians will move into the facility during 1990.

2.6 Update on MRI and Lithotripsy

SEH began offering Magnetic Resonance Imaging services to patients in December 1989. The scans are done in a mobile unit shared with Cardinal Cushing General Hospital in Brockton, which, like SEH, is a member of Caritas Christi, a Catholic health care system in Massachusetts. The MRI service is operated by Caritas Christi Diagnostic Support Services. The mobile MRI van is located adjacent to the Radiology Department in the Cardinal Medieros Pavilion. The pad and entryway to the Medieros Pavilion were constructed in the fall of 1989 following review and approval of the project by the Allston/Brighton PZAC. Currently, the MRI van is at SEH three days each week. SEH plans to use the same site for a mobile lithotripter, an ultrasonic instrument used to treat kidney stones. This unit will be operated by a consortion of several area hospitals and is expected to begin operating at SEH in 1990.

2.7 Cardinal Cushing Pavilion

SEH plans to undertake major interior renovations of the Cardinal Cushing Pavilion's interior, including heating and cooling systems, wiring, plumbing and mechanical infrastructure. This project will require temporarily moving certain clinical and administrative uses into other existing buildings on campus. There will be no change of use in the building. It will remain as a medical-surgical facility. The renovations are planned to take place over the next several years.

2.8 Our Lady's Hall

SEH is proposing to develop a day-care center for employees' children on the first floor of Our Lady's Hall. It would serve up to 42 children of employees. There is currently no timetable established for this project.

2.9 Master Plan Summary

Since submission of the SEH Master Plan Update in October 1988, there have been no significant changes in use of any buildings on the SEH campus except those noted above. As stated in the 1988 Master Plan Update, there are no changes in use contemplated for the Cardinal Medieros Pavilion, Mother Mary Rose Clinic, St. Elizabeth Ann Seton Pavilion, St. Joseph's Hall, House Officers Quarters, the parking garage, and Associated Catholic Hospital Building (leased). The proposed alterations in the Cardinal Cushing Pavilion and Our Lady's Hall are not expected to result in additional traffic to the campus or changes in the exterior of buildings. The Cardinal Cushing renovations are necessary improvements to retrofit existing space. The day care center is planned for employees who already travel to the campus.

3.0 ST. MARGARET'S HOSPITAL FOR WOMEN RELOCATION

3.1 Detailed Project Description

The proposed project for the relocation of SMHW will include 98 beds (35 obstetrical postpartum beds, 10 antepartum beds, 8 GYN beds, 45 neonatal intensive care beds) and 37 bassinets. (The total of new beds added to the campus will be 80 because SEH will combine its existing 18-bed OB unit with the new facility.) SMHW is relocating to a site on the SEH campus to the rear of the Cardinal Cushing Pavilion (see Figure III-1 for Site Plan).

The proposed project consists of a five-story, 85,064 square foot hospital facility. In addition, the 330-space garage is planned to serve SEH's Medical Office Building and SMHW. Following construction, improvements to the area will include stabilization of the existing steep hillside, including run-off protection and the upgrading of adjacent landscaping. While traffic will increase in association with the proposed development, the new hospital's traffic ciruculation will be integrated with that of SEH and access roads within the campus will be of sufficient size to accommodate the new traffic. Traffic mitigation measures are proposed to be provided by the hospital to make traffic flow at nearby intersections better than what it is estimated to be in the future without construction of the project (see Appendix 2 - Transportation Access Plan).

3.2 The Need for SMHW to Relocate

SMHW is a 114-bed, not-for-profit, obstetrical/gynecological hospital sponsored by the Roman Catholic Archdiocese of Boston. It specializes in medical care for women and infants, serving as one of the five designated regional perinatal centers in Massachusetts, and one of the two Level III maternal-infant high risk centers in Boston. Both SMHW and SEH are members of Caritas Christi, a regional Catholic health care system sponsored by the Archdiocese of Boston. The hospital is also a major teaching facility for the Tufts University School of Medicine and is a member of the Boston Perinatal Group. In the 115 years it has operated, SMHW has grown from a community-based facility to a regional hospital serving high-risk patients. For more than 20 years, the hospital has been servicing the needs of high risk obstetrical and neonatal patients from the neighborhoods of Boston to as far north as New Hampshire and south to Rhode Island.

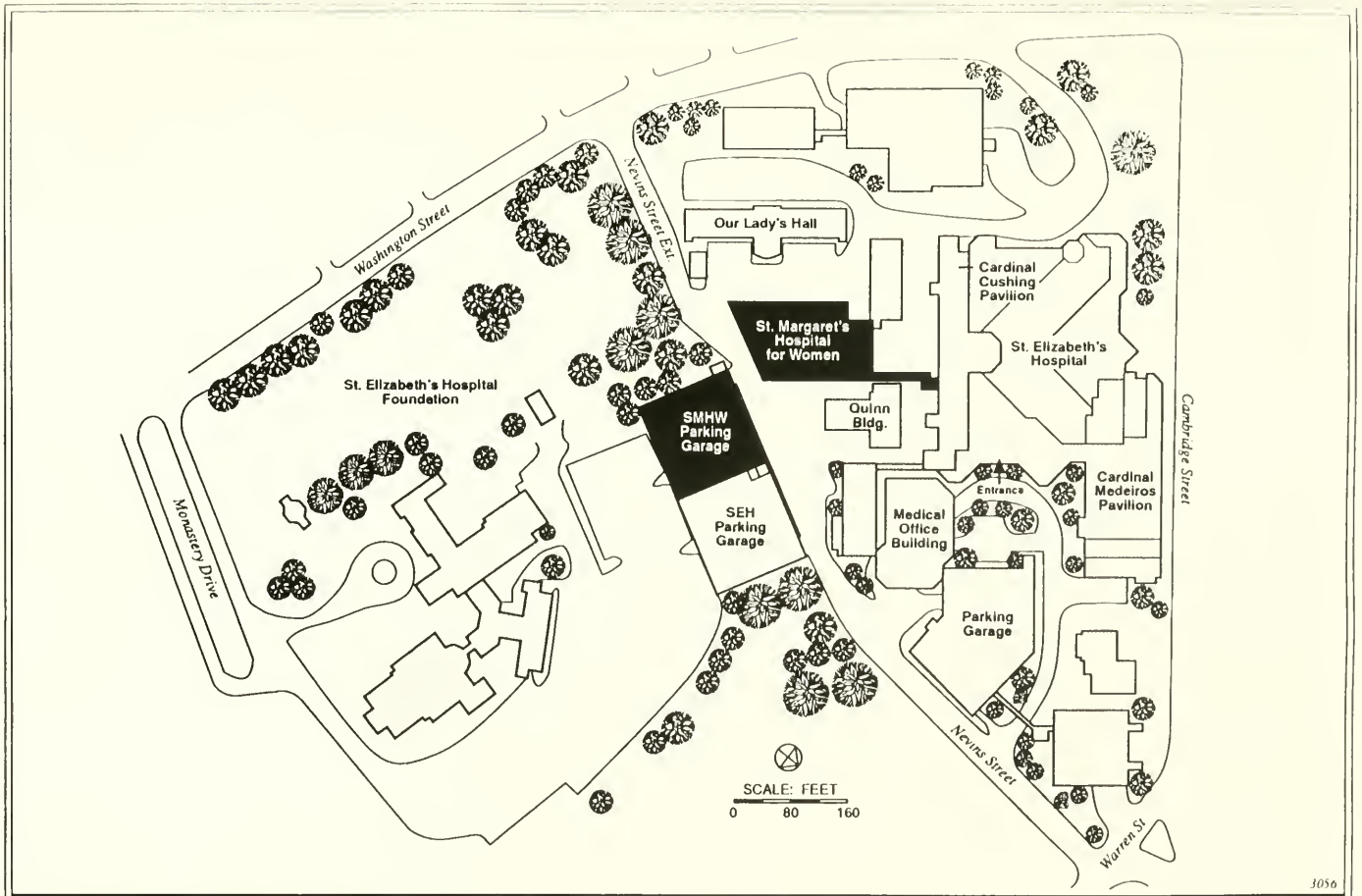


FIGURE III-1
SITE PLAN
St. Margaret's Hospital for Women

SMHW is one of the few remaining freestanding obstetrical hospitals in the United States and the only regional neonatal center that is not located or connected to a major general hospital. Because SMHW treats high-risk patients, on-site availability of technologically advanced equipment and medical specialty services will be required to continue to provide the high level of care required by these patients. The current facility prevents SMHW from accepting certain types of high risk maternal and neonatal transfers. Thus, some patients who could benefit from the specialized perinatal services provided by SMHW are not able to do so.

The lack of a full range of medical services also hampers the hospital's ability to recruit obstetricians to replace those retiring from the staff. With a growing shortage of practicing obstetricians in Massachusetts, those who remain prefer to practice in a facility with a full range of medical services immediately available.

The present SMHW facility includes nine structures, some constructed as early as 1900. The most recent addition was in 1974, the only major construction or renovation since 1957.

Rebuilding on the existing site would not meet the clinical mandate to be adjacent to a full-service medical/surgical acute care hospital and is not possible to do without interruption of services and extremely high costs.

In addition, the hospital has conducted several facility maintenance and replacement studies - the most recent by the Aldrich Company in 1980. St. Margaret's has addressed many of the facility problems identified by Aldrich, but due to the age and location of the buildings, there are major facility constraints which cannot be resolved without significant renovations and/or new replacement construction.

Many key areas are undersized compared to state and federal standards and substantially below widely-accepted current facility planning recommendations. There are not sufficient private rooms to consistently allow for appropriate patient placement. Of the existing 114 adult beds, only 7 beds, or 6% are in private rooms. Current planning standards suggest 20%-25% to meet patient clinical needs.

The elevators are slow, insufficient in size and number. The heating, ventilating, and air-conditioning systems are old, undersized, and require frequent repairs. The heating plant is at maximum capacity and there is limited central air-conditioning. The sophisticated temperature and humidity controls which will be required for future medical technology would be extremely expensive, if not impossible, to install in the existing buildings.

The existing site poses unreasonable constraints for the effective continued use, upgrading, or major renovation of the Hospital. Site circulation and parking are difficult. Access to SMHW is restricted by three steep winding roads leading to the hospital. The site is also landlocked by private housing. Rebuilding would have to be in phased construction, requiring moving or closing critical programs, adding substantially to cost and construction time and limiting the range of medical services available during construction.

The SEH location was chosen by SMHW to facilitate operational efficiencies of shared ancillary and support services as well as to enhance access to tertiary medical care services for high risk mothers and infants. SMHW remains committed to continuing its services within the City of Boston and will continue to provide important outpatient medical services at its Dorchester location.

The SMWH building on the SEH campus will be designed to architecturally complement the existing hospital. The new hospital will be lower than the adjacent Cardinal Cushing Pavilion to which it connects and lower than Our Lady's Hall. The new hospital and garage facilities, in the rear of the campus, will have no visual impact on the residential community, and will maintain the maximum amount of open space on the SEH campus.

4.0 OPEN SPACE

The SEH campus has been developed so that open space areas are visible to the community, while roadways, parking lots and garages and service areas are in the rear of the campus and hidden from neighborhood view. The campus' open space area is the hillside along Cambridge and Washington Streets. In summer, hospital staff often bring their lunches outside and sit on the grassed hillside near the Seton Pavillion. There is no open space on the campus in the location of the proposed project.

4.1 Open Space Planning

All existing open space areas on the SEH campus will be maintained in planning for the new SMHW facility. The relocation will require the replacement of the Keith Chapel and adjoining paved areas on the SEH site. The available open space used by hospital staff will not be impacted.

4.2 Impact of New Facilities on SEH Campus

The new hospital facility will be built on the current site of the Keith Chapel building and surrounding paved driveway and parking area on the SEH campus. The Keith Chapel will be replaced by the project. The City of Boston's Environment Department and staff of the Boston Landmarks Commission indicated in a letter to the Secretary of Environmental Affairs, following their review of the Draft Environmental Impact Report submitted by SMHW to the Massachusetts Environmental Protection Agency in 1989, that the Keith Chapel does not meet requirements to be listed on the National Register of Historic Places (see Appendix 1).

The 330-space parking garage for SEH and SMHW is planned to be built into the steep hillside along the property line between SEH and the Foundation. Approximately three to four feet of the new garage would be visible at close range above the Foundation grounds. Upon project completion, the earth would be bermed up to the top of the garage, following the gentle curves of the hillside. In addition, trees and shrubs would be placed around the perimeter of the new garage. The design of the garage, which would be visible to the inside of the SEH campus, would fit in with campus exterior treatment.

The new access driveway (the extension of Nevins Street to Washington Street) has been proposed to improve existing traffic operations at the Nevins Street/Warren Street and the Warren Street/Cambridge Street/Sparhawk Street intersections. This proposed access would be a driveway approximately 30 feet wide that would extend from the new garage and extend behind Our Lady's Hall along the property line between the Foundation and SEH.

5.0 DESIGN CONSIDERATIONS

Although the proposed hospital building and garage are in a very preliminary stage of planning, several design considerations have been established which will guide the detailed design process. These include:

- o Minimizing the massing and presence of the garage and avoid use of raw concrete on the exterior;
- o Use of materials which are consistent with the existing buildings (but not limited to an exact replication of them);
- o Minimizing the scale and visual impact of the new buildings on the campus and adjacent neighborhoods; and
- o Minimizing the visibility of mechanical systems and components.

It is SMHW's intent that its new hospital facility and parking garage structure enhance the relationships between the existing buildings on the SEH campus. The proposed new facility is replacing an existing smaller building and has a minimal footprint, massing and height. Materials used in the construction will be sensitive to the existing structures. Fenestration will approximate existing proportions and ratios of wall to windows and doors in the existing facility.

5.1 Architectural Compatibility and Visual Impact

The proposed new SMHW building will strengthen the existing building relationships within the SEH campus. As such, they will continue to contribute to the overall design character of the SEH campus and be compatible in height and massing.

The sectional view of the proposed hospital and garage facility (Figure V-1) illustrates that the views of the garage will be masked by the hillside of the SEH Foundation Property, and the hospital itself will be one story lower than SEH's Cardinal Cushing Pavilion and Our Lady's Hall.

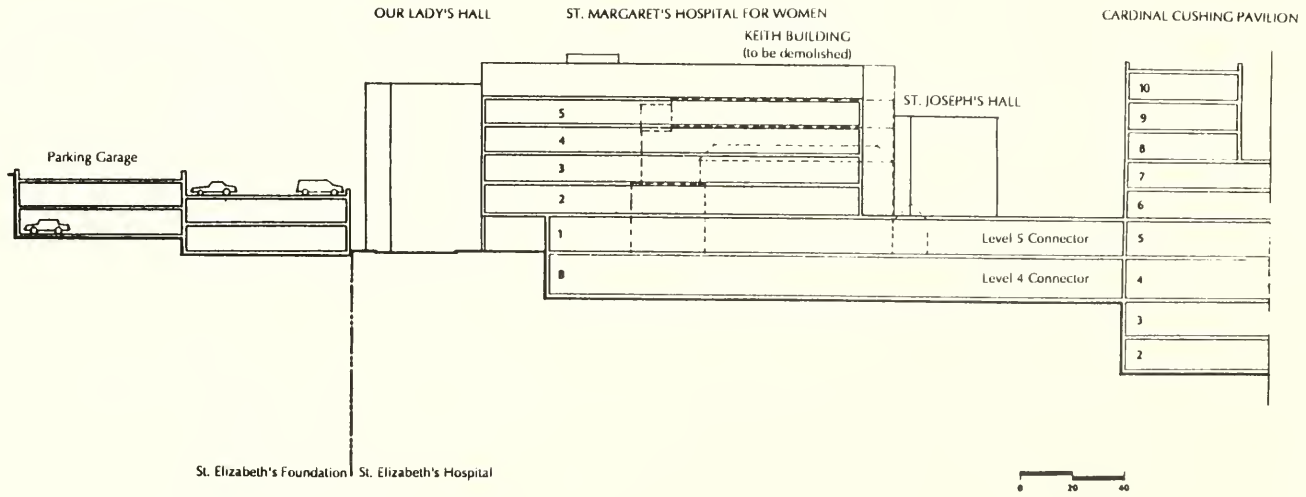


FIGURE V-1
SECTION OF PROPOSED SMHW FACILITY AND GARAGE

In order to depict the visibility of the new SMHW facility and parking structures from the neighboring commercial and residential areas, a number of photographic slides were taken from a variety of locations along Cambridge, Washington and Warren Streets. The locations of the new buildings were then drawn and superimposed onto the slide views. This process resulted in no views of the proposed new facilities at all from outside the campus. The new buildings are hidden by existing buildings and the slope of the hillside. These existing buildings effectively conceal SMHW due to their lower, intervening location on the campus hillside.

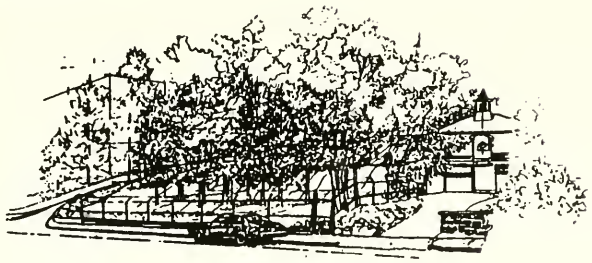
SMHW has provided two eye-level views (Views A and B) looking towards the garage from points A and B, whose locations are noted on the Site Plan (Figure V-2).

View A

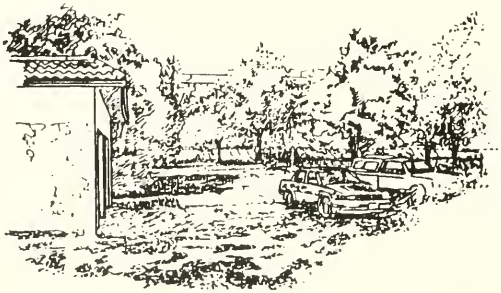
This view is from the residential side of Washington Street looking toward the Foundation property and the proposed site of the garage. The garage cannot be seen due to existing trees along Washington Street, earth-berming, landscaping and the nature of the garage's below-ground location. The proposed new access road is at the far left.

View B

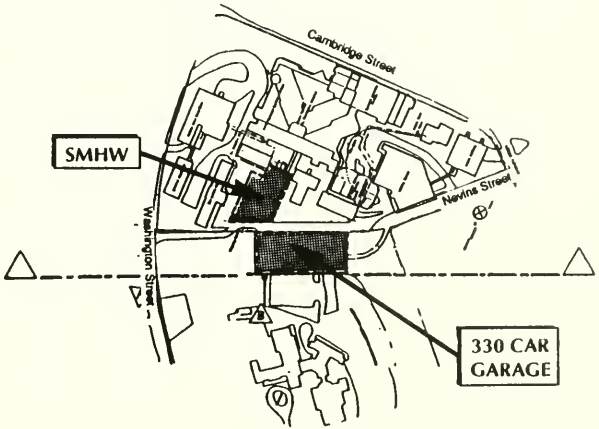
Here the perspective is from an existing ancillary building on the Foundation property towards the new garage and the hospital. Note that the new garage is hidden, as are the cars on its top level, by a landscaped earth berm. A small portion of the new SMHW is visible beyond the garage through the trees.



VIEW FROM WASHINGTON STREET (A)



VIEW FROM SEH FOUNDATION (B)



DEAN TUCKER SHAW

FIGURE V-2
ILLUSTRATIVE PERSPECTIVES: PROPOSED SMHW FACILITY AND GARAGE

6.0 COMMUNITY BENEFITS

The relocation of SMHW to the SEH campus will provide the immediate area and the city with significant medical and community benefits. Boston is recognized as a center of medical leadership and this move will further enhance the city's stature by allowing this specialized neonatal facility to continue to meet the needs of the city's residents.

6.1 Health Care Benefits

Bringing the new SMHW facility to Brighton will provide many benefits to the community:

- Inpatient obstetrics service with family-centered birthing options
- State-of-the-art labor/delivery/recovery rooms
- Well infant nursery
- Neonatal intensive care unit for critically ill infants
- Inpatient gynecology service
- Outpatient obstetrics services, including pre-and post-natal care
- Prenatal services for women with complicated pregnancies
- Specialized medical consultants for high risk pregnancies
- Midwife services
- Diagnostic services, including ultrasound and prenatal evaluation
- Outpatient well baby care
- Infant development program designed to deal with infant physical and cognitive development disorders
- Outpatient gynecology services, including services like PAP tests and colposcopies
- Breast cancer screening through mammography
- Breast Health Center with specalized consultations and treatment
- Women's Health Center, providing medical care for women of all ages
- Comprehensive care through the availability of a wide range of medical specialties
- Nutrition education and counseling
- Social services
- Psychological services

- o Counseling/support group for drug addicted mothers
- o Patient education programs, including childbirth education
- o Obstetrical medical education program to train new obstetricians to help the hospital bring highly qualified obstetricians to the community
- o Enhanced medical research program.

SMHW will provide important outpatient medical services in Dorchester. The services proposed to be provided in Dorchester include:

- o Prenatal care to expectant women, including women who have complicated pregnancies at SMHW obstetrics clinic
- o Prenatal care for expectant teenagers at SMHW teen obstetrics clinic
- o Prenatal diagnostic services, including ultrasound and prenatal evaluation at SMHW outpatient diagnostic clinic
- o Prenatal care at neighborhood health centers staffed by SMHW physicians and nurse midwives
- o Prenatal and well baby care at the Laboure Center in South Boston
- o Outpatient gynecology services, including services such as PAP tests and colposcopies, at SMHW gynecology clinic
- o Breast cancer screening through mammography services
- o Well baby care at SMHW pediatric clinic
- o Nutrition education and counseling with prenatal and postnatal care
- o Social services and psychological services
- o Child abuse prevention program in the form of a therapeutic day care program to be developed in concert with the SMHW Infant Development Program
- o Prenatal education classes
- o Program to identify, educate and refer women and infants with HIV infection
- o Family Life Education, which provides comprehensive programs on topics such as family planning and human sexuality to community groups and schools throughout the Archdiocese
- o St. Mary's Home residential program for pregnant teenagers, including St. Mary's Alternative School
- o St. Mary's Home residential transitional program for mothers and their infants after delivery

- o A residential program for pregnant women who have been through substance abuse programs at another facility
- o Developmental assessment program for high risk infants

The relocation of SMHW to the SEH campus improves the health care capacity of SMHW and SEH hospitals. The combination of women's health care services at SMHW will dramatically expand the health care resources available to women from Allston/ Brighton, other Boston neighborhoods, and the Greater Boston region. As a major regional perinatal center, SMHW can more effectively provide tertiary-level services at the SEH site with its greater supply of medical specialties. High-risk obstetrical patients will have access to specialized diagnostic and treatment modalities, as well as intensive care units. Patients will also be provided with specialized consultants in areas such as obstetrical psychiatry, internal medicine, cardiology, and nephrology.

The relocation program at SEH will enable SMHW to continue its long-term commitment to high-risk and needy patients. SMHW will support neighborhood health centers in Dorchester and in the Allston/Brighton area and participate in progams designed to improve the health status of populations that have a high infant mortality rate and low birth weight. The hospital will expand services to women beyond obstetrical and neonatology to care for women throughout their life cycle. This long-term program benefits the communities of Boston by allowing SMHW to continue its tradition of providing health care to all women of Boston.

6.2 Employment Opportunities

Both SMHW and SEH have personnel policies in place regarding hiring of employees.

The hospital(s) will adhere to current personnel policies regarding equal opportunity employment. Because the hospital industry is currently facing a shortage of certain categories of health care personnel, it is sometimes the case that qualified, experienced staff are recruited from geographic locations outside the hospital's traditional service area.

With the above in mind, the hospital(s) will make a good faith effort to achieve the goal of having at least 50 percent of permanent employees from Boston.

The goal of attaining this 50 percent level represents a voluntary employment opportunity plan that is achievable. In fiscal year 1988, SMHW had 43.7% of its employees permanently residing in Boston and SEH had 47.9% of its employees permanently residing in Boston. Therefore, both of these institutions are currently near the goal.

Both hospitals presently employ many Bostonians, with SEH being one of the largest employers in the Allston/Brighton area and the largest employer of Allston/Brighton residents. The hospitals provide many employment opportunities, with excellent benefits for community residents. Both hospitals harbor an atmosphere of professional growth and excellence, which contributes to the development and promotion of its employees. The hospitals employ people in a wide range of full- and part-time entry level, general, technical, and professional positions.

The following statistics confirm the commitment to hiring Boston residents:

	EMPLOYEES	
Neighborhood	SEH	SMHW
ALLSTON/BRIGHTON	754	8
Charlestown	7	3
Dorchester	77	221
Hyde Park	34	8
Jamaica Plain	29	10
Mattapan	14	13
Roslindale	49	8
Roxbury	28	5
South Boston	19	25
East Boston	3	--
West Roxbury	64	15
Other Neighborhoods	75	15
TOTAL FOR BOSTON	1,153 (47.9%)	331 (43.7%)
Other Towns	1,256	428
TOTAL EMPLOYEES	2,409	759

In addition, the project is estimated to generate over 160 construction jobs.

6.3 Community Services

SMHW and SEH have been good neighbors for many years. Both hospitals have allowed the use of their facilities for community functions such as meetings, educational sessions and social gatherings. Local schools are given tours for field trips and employment counseling. The hospitals have worked closely with the neighborhoods in areas of security, public works, and other community concerns.

Following are some of the programs and services provided by the hospitals.

St. Elizabeth's Hospital

- Health education and wellness programs, including cardiopulmonary resuscitation, smoking cessation and blood pressure screening
- Free flu shots and blood pressure screening for community residents
- Provide flu shots, blood pressure screenings, health education lectures to residents of public housing in Brighton
- Continuing education to emergency medical technicians
- Free meeting space for community groups
- Emergency response system for isolated elders
- Participate in community initiatives, including Boston Against Drugs, Youth Core and Allston/Brighton Family Day
- Sponsor St. Elizabeth's Angels Little League team and assist with annual Brighton Little League dinner and annual Festival of Friendship for mentally and physically handicapped children
- Provide physician referral service for community residents
- Family life education for schools and community groups
- Hospital tours for local school children
- Provide holiday food baskets to neighborhood needy, holiday dinners for area retarded citizens, Thanksgiving turkeys for area shelters and holiday refreshments to local fire and police
- Assist with fundraising for Brighton Congregational Church, Early Learning Center, Mt. St. Joseph's Academy, Brighton High School, Baldwin Elementary School, American Cancer Society, American Heart Association, local libraries, public television, St. Columbkille, Our Lady of the Presentation and St. Anthony's schools, YMCA and Kiwanis

- o Participate in Brighton High Drop-Out Prevention Program
- o Provide support to Brighton High, such as printing student handbook, guidance handbook and newsletter
- o Participate in Boston Summer Jobs Program by providing full- and part-time jobs, job placement assistance and vocational counseling for area high school students
- o Participate in Brighton High Improvement Committee
- o Sponsor St. Elizabeth's Hospital Medical Explorer Post for Mt. St. Joseph's Academy students to explore careers in health care
- o Baldwin Elementary and Brighton High Business Partner in programs to improve the quality of public school education
- o Participate in Allston/Brighton Head Start for elementary schools and Early Learning Center for preschools
- o Provide medical supplies to schools and to West End House summer camp
- o Participate in neighborhood initiatives like clean-up and beautification projects
- o Provide speakers to discuss medical issues with community groups
- o Host annual Gerry McCarthy Easter Egg Hunt for more than 1000 neighborhood children
- o Participate in annual Allston/Brighton parade and ethnic festival and in local cultural/business events
- o Provide administrative and clinical support to Joseph Smith Health Center
- o Sponsor American Heart Association Chapter
- o Participate in annual holiday street lighting

St. Margaret's Hospital for Women

- o Participate in Jones Hill Civic Association
- o Participate in Dorchester Task Force
- o Sponsor annual safety awareness programs for area residents
- o Provide meeting rooms for community groups
- o Provide overnight parking for neighborhood residents
- o Support Dorchester Day celebration

- Support the neighborhood in street lighting, postal service snow plowing
- Participate in area crime watch
- Participate in neighborhood clean-ups
- Provide transportation support to community residents
- Annual holiday gift donation to the DOVE shelter
- Participate in United Way
- Participate in Mayor's Canned Food Drive
- Tours of facilities for local school children

7.0 COMMUNITY REVIEW

SMHW and SEH have participated in a community review process concerning the relocation project that has involved interested individuals and community groups in Brighton and Dorchester, elected officials and government representatives and other health care provders. Throughout the planning process, SMHW and SEH have worked to resolve concerns and to design a project which will be a good neighbor. The hospitals will continue this open process and comply with the intent of the Allston/Brighton IPOD to open its planning process to the city and nearby areas.

SEH submitted to the BRA in October, 1988 a Master Plan Update that discussed the proposed SMHW development. SEH submitted its Master Plan on September 20, 1988. SEH will continue to update the BRA and city on an annual basis as provided for in the Allston/Brighton IPOD requirements.

SMHW has met with key community groups, city agencies and elected officials to introduce the project in its design concept form. This process has also allowed the hospital to address many concerns raised through the MEPA process last fall.

A partial listing of meetings with interested parties and groups during the past 16 months follows:

- o July and August, 1988 - Open meetings with community groups in Allston/Brighton to discuss proposed Determination Of Need (D.O.N.) submission.

- o October 21, 1988 - Consultation/scoping session with MEPA, city and community participants to present SMHW concept and plans for the relocation of the hospital to the campus of SEH.

- o May, 1989 - Meetings with school principals and staff of nearby Boston public schools to discuss safety and traffic issues.

- o May 9, 1989 - Meeting with Allston Civic Association Board at St. Anthony's Rectory to present SMHW project.

- o May 15, 1989 - Meeting at Brighton Congregational Evangelical Church to present the SMHW plan to the church group.

- May 16, 1989 - An open meeting with the Allston Civic Association at the VFW Post in Allston to present SMHW plans.

- May 18, 1989 - Meeting with the Jackson-Mann Community School Council at Jackson-Mann to present SMHW plans.

- May 25, 1989 - Meeting with Captain O'Neill of the Boston Police, Brighton Office, to discuss traffic study.

- May 30, 1989 - Meeting with the Washington Hills Civic Association at the Oak Square VFW Post to present SMHW plans.

- May 31, 1989 - Meeting with the Allston Board of Trade at the West End House to present SMHW plans.

- May 31, 1989 - Meeting with the Allston Board of Trade at the West End House to present SMHW plans.

- June 1, 1989 - Meeting with the Allston/Brighton Medical Care Coalition to present SMHW plans.

- June 3, 1989 - Meeting with the Jones Hill Civic Association Board to discuss SMHW plans.

- June 5, 1989 - Meeting with the Jones Hill Civic Association to discuss SMHW plans.

- June 6, 1989 - Meeting with the Allston/Brighton Kiwanis Club at Allston's Ramada Inn to present SMHW plans.

- June 13, 1989 - Meeting with the Uphams Corner Health Center to discuss SMHW plans.

- June 14, 1989 - Coffee Hour, home of Elaine Thomas, Brighton.

- June 14, 1989 - Meeting with the Brighton Board of Trade at the Greater Boston Bank to present SMHW plans.

- June 19, 1989 - Meeting with the Neponset Health Center to discuss SMHW plans.

- June 19, 1989 - Coffee Hour, Home of Celia Bornstein, Brighton.

- June 21, 1989 - Meeting with the Bowdoin Street Health Center to discuss SMHW plans.

- June 21, 1989 - Coffee Hour, Home of Carolyn Parker, Brighton.

- June 22, 1989 - Coffee Hour, Home of Claire and Albert Introini, Brighton.

- June 29, 1989 - Meeting with the Dorchester Bay Economic Development Corporation.

- June 29, 1989 - Coffee Hour, Home of Maryah Antonellis, Brighton.

- June 30, 1989 - Meeting with the Little House Health Center.

- July 5, 1989 - Meeting with the Codman Square Health Center.

- July 11, 1989 - Meeting with the Dorchester House Health Center.

- July 12, 1989 - Meeting with the Roslindale Health Center.

- July 13, 1989 - Public hearing held by Massachusetts Department of Public Health as part of Determination of Need process.

- July 24, 1989 - Presented proposed project to Allston-Brighton PZAC.

- September 11, 1989 - Meeting with Jones Hill Civic Association to discuss SMHW plans.

- September 18, 1989 - Meeting with Director of Uphams Corner Neighborhood Health Center.

- September 19, 1989 - Meeting with Director of Little House Neighborhood Health Center.

- September 20, 1989 - Meeting with Director of Dorchester House Neighborhood Health Center.

- September 21, 1989 - Meeting with Director of Codman Square Neighborhood Health Center.

- September 26, 1989 - Meeting wih Director of Neponset Neighborhood Health Center.

- September 27, 1989 - Meeting with Director of Bowdoin Street Neighborhood Health Center.

- September 28, 1989 - Meeting with Director of Roslindale Health Center.

- September 29, 1989 - Meeting with representatives of Jones Hill Civic Association.

- October 2, 1989 - Meeting with Jones Hill Civic Association.

- October 4, 1989 - Meeting with Massachusetts Historical Commission and Boston Landmarks Commission.

- October 6, 1989 - Meeting with Commissioner of Dept. of Health & Hospitals, City of Boston.

- October 10, 1989 - Meeting with Ed Grimes, Director of Uphams Corner Health Center.

- October 12, 1989 - Meeting with Director of Laboure Neighborhood Health Center.

- October 13, 1989 - Meeting with Department of Public Health, Director of Bureau of Community Health Programs, Division of Substance Abuse, Perinatal Services/Southeast Region.

- October 23, 1989 - Meeting with the Conversion Board's Community Needs Determination Committee.

- November 1, 1989 - Meeting with Dorchester community leaders.

- November 2, 1989 - Meeting with Little House Health Center.

- November 6, 1989 - Meeting with Bowdoin Street Health Center.

- November 6, 1989 - Meeting with Jones Hill Civic Association

- November 7, 1989 - Meeting with Roslindale Health Center.

- November 8, 1989 - Meeting with Ed Grimes, Director of Uphams Corner Health Center.

- November 8, 1989 - Meeting with Columbia Health Center.

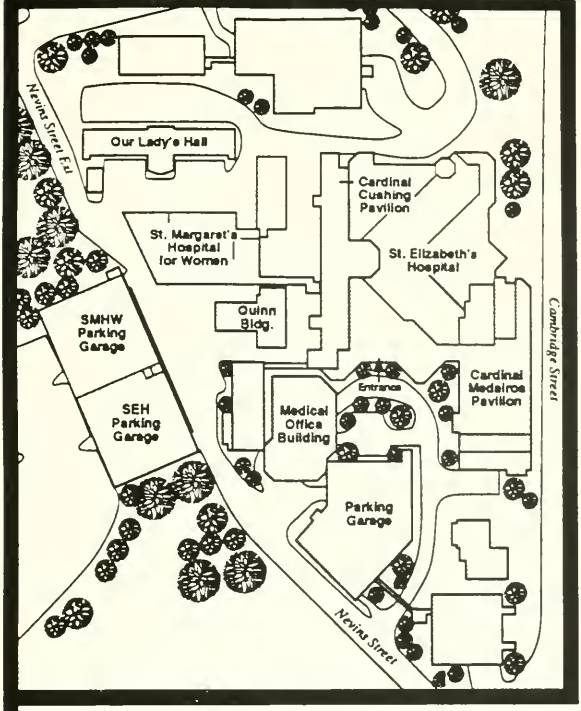
- November 17, 1989 - Meeting with Urban League of Health Centers.

- November 30, 1989 - Public Hearing in Dorchester for Conversion Board's Community Needs Determination Committee.

- December 7, 1989 - Public Hearing in Brighton for Conversion Board's Community Needs Determination Committee.

- January 17, 24 and 31, February 7 and 14, 1990 - Meetings with Allston/Brighton PZAC Task Force.

SEH and SMHW are committed to continue community outreach throughout the planning and construction phases.



APPENDIX 1

Letter to Secretary John DeVillars,
Executive Office of Environmental Affairs,
Commonwealth of Massachusetts

From L.M. Downey, Director
The Environment Department
City of Boston
July 26, 1989

July 26, 1989

AUG - 1 1989

Mr. John DeVillars, Secretary
Executive Office of Environmental Affairs
100 Cambridge Street, 20th Fl.
Boston, MA. 02202

City of Boston
The Environment
Department

Boston City Hall/Room 805
Boston, Massachusetts 02201
617-725-4416 or 725-3850

ATTN: MEPA Unit, Nancy Baker, EOEA #7335, St. Margaret's Hospital Draft Environmental Impact Report.

Dear Secretary DeVillars:

The City of Boston Environment Department has reviewed the St. Margaret's Hospital Draft Environmental Impact Report and would like to submit the following comments:

1. The DEIR was in error in its supposition that the architect of the Keith Chapel is not noteworthy. The architect of the Chapel, Edward T. P. Graham, is considered a noteworthy architect who designed numerous institutional buildings and Churches in Boston and its suburbs. Significant structures in Boston designed by Graham include the Forsyth Dental Infirmary in the Fenway, Boston City Hall Annex and Church of the Holy Name in West Roxbury, as well as five structures in the original St. Elizabeth's Hospital Complex. However, the staff to the Boston Landmarks Commission has determined that the Chapel does not appear to meet the special eligibility requirements for religious properties listed in the National Register of Historic Places.

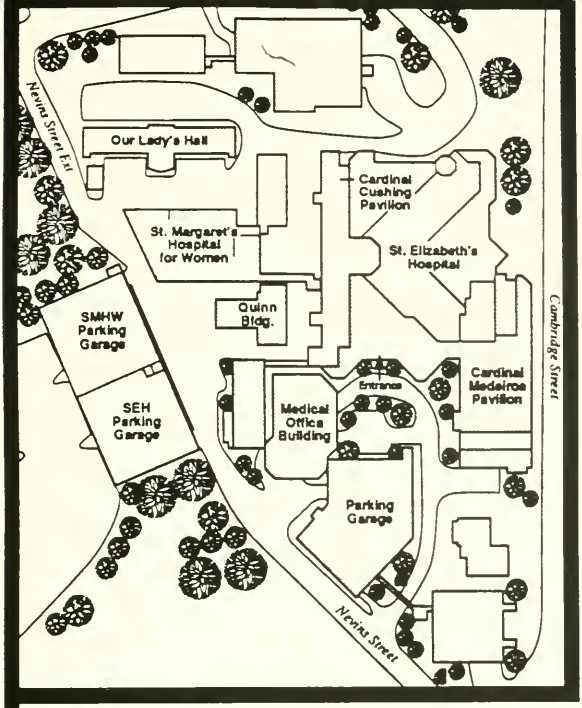
   In addition, in an Environmental Impact Report we consider it inappropriate to include the subjective opinion of a consultant on the merits of an architect or historic building rather than those of professional agencies having expertise or jurisdiction in the preservation field.

I appreciate the opportunity to comment.

Sincerely,

L. M. Bowney, Director
The Environment Department

LMD/DKB/dkb



APPENDIX 2

Transportation Access Plan
St. Elizabeth's Hospital

TRANSPORTATION ACCESS PLAN

ST. ELIZABETH'S HOSPITAL OF BOSTON

MARCH 1990

Prepared by:

BRUCE CAMPBELL & ASSOCIATES, INC.
Boston, Massachusetts

3056-13/ENV-2310

TRANSPORTATION ACCESS PLAN
ST. ELIZABETH'S HOSPITAL OF BOSTON

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1.0 SUMMARY

With the relocation of St. Margaret's Hospital for Women (SMHW) to the St. Elizabeth's Hospital (SEH) campus in Brighton, a new access (the extension of Nevins Street) has been proposed to improve traffic operations at the Nevins Street/Warren Street and the Warren Street/Cambridge Street/Sparhawk Street intersections.

The extension of Nevins Street will improve safety at the Nevins Street/Warren Street intersection by reducing the number of vehicles using that area and potential vehicle/pedestrian conflicts.

A shuttle system is proposed to transport SMHW employees, patients and visitors to and from the SEH site and to decrease auto traffic traveling to and from the hospital's new location.

With the completion of the new hospital and garage, pedestrian circulation between the hospital and employee parking lot will be improved. The new access extending Nevins Street to Washington Street will provide a more direct pedestrian link between Washington Street and public transportation by MBTA bus and Green Line trains and the hospital campus.

2.0 INTRODUCTION

Bruce Campbell & Associates, Inc. (BC&A) was retained to study traffic impact and to evaluate the access/egress requirements for the proposed relocation of SMHW. The site, shown in Figure II-1, is located on the southerly side of Cambridge Street between Warren Street and Washington Street.

A 330-car garage is planned to serve SEH's Medical Office Building and SMHW. The remaining staff parking will be accommodated by the existing St. Elizabeth's Hospital Foundation lot and spaces offsite that the hospital leases. This garage space will fulfill the long-term parking need for SMHW and SEH. Access to the garage will be from Nevins Street via Warren Street or Washington Street. Access to the Foundation parking lot will be from Monastery Road off Washington Street.

The new access has been proposed to improve existing traffic operations at the Nevins Street/Warren Street and the Warren Street/Cambridge Street/Sparhawk Street intersections and in response to comments received from the Massachusetts Executive Office of Environmental Affairs following its review of SMHW's Draft Environmental Impact Report. The analyses presented in the following sections assume this access/egress will be in operation before full occupancy of SMHW.

The relocation of SMHW is anticipated to be completed in 1993. For analysis purposes, the SMHW relocation building consisted of approximately 85,064 square feet of hospital space (98 beds and 37 bassinets).

This analysis has been prepared in accordance with the Allston-Brighton Interim Planning Overlay District (IPOD) zoning requirements as adopted by the City of Boston (Article 27F) in August, 1987. The analysis includes an inventory of the existing roadways, including roadway geometry and traffic control, traffic counts, field studies of traffic operations and parking turnover, and pedestrian/vehicular safety analysis. It addresses the traffic impact of the proposed relocation of SMHW on study area intersections and assesses the roadway network's ability to accommodate this increased traffic. This analysis also evaluates the adequacy of the existing and proposed parking facilities. Where negative effects of the project are realized, mitigation measures are recommended.

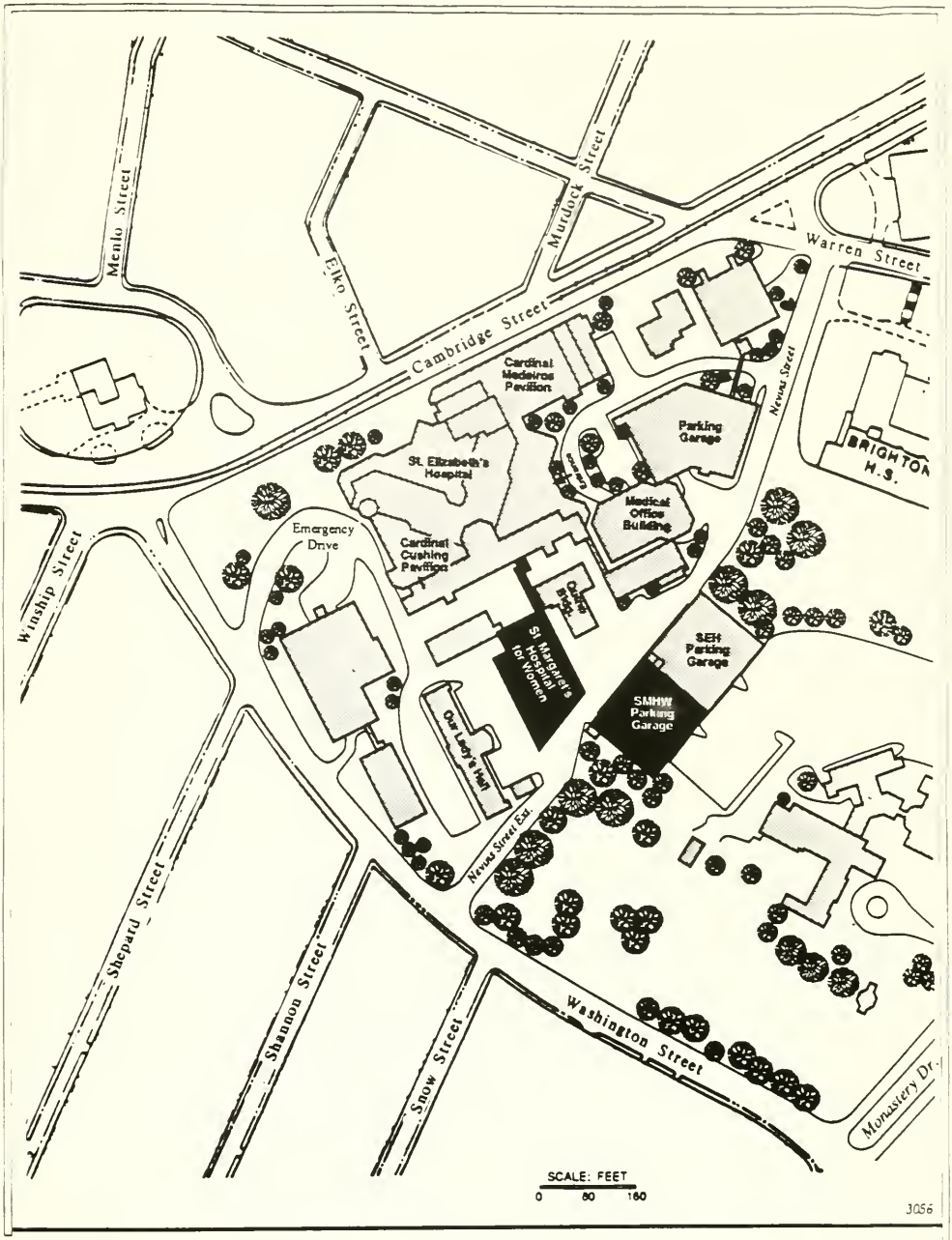

FIGURE II-1
SITE LOCATION AND LOCAL STREET SYSTEM

3.0 EXISTING CONDITIONS

3.1 Location

SEH is located on the southerly side of Cambridge Street between Warren Street and Washington Street. SMHW will be accessed from Nevins Street.

The analysis addresses traffic impacts on a number of roadways in the vicinity of the site and their intersections. The intersections analyzed include the following:

- Warren Street/Nevins Street
- Cambridge Street/Warren Street/Sparhawk Street
- Cambridge Street/Washington Street/Winship Street
- Washington Street/Emergency Drive/Shepard Street
- Washington Street/Monastery Road
- Washington Street/Nevins Street

3.2 Traffic Volumes

Average daily traffic volumes on the study area roadways were compiled from a variety of sources: 24-hour automatic traffic recorder (ATR) counts done by BC&A and City of Boston 11-hour turning movement counts. The average daily traffic (ADT) volumes are calculated by multiplying the 11-hour turning movement counts by City of Boston adjustment factors and are summarized in Table III-1.

Peak hour turning movement counts were conducted (Thursday - September 1, Monday/Tuesday - September 12/13 and Tuesday/ Wednesday - September 27/28, 1988) for the morning (6:00 AM - 9:00 AM) and afternoon (3:00 PM - 6:00 PM) peak periods at the following intersections:

- Cambridge Street/Warren Street/Sparhawk Street
- Cambridge Street/Washington Street/Winship Street
- Washington Street/Monastery Road*
- Washington Street/St. Elizabeth's Emergency Room Drive/Shepard Street*

---

* Split counts were done at these intersections to determine directions of approaches and departures. Peak hour information was determined from the ATR counts done by BC&A.

TABLE III-1
AVERAGE DAILY TRAFFIC

Location	ADT Vehicles Per Day (VPD)	
Nevins Street	2,670	*
Warren Street	14,300	**
Cambridge Street		
East of Warren Street	24,350	**
West of Warren Street	24,650	**
Washington Street		
South of Cambridge Street	15,500	**
Northwest of Cambridge Street	21,850	**
Sparhawk Street	8,800	**
Winship Street	8,800	**
Monastery Road		
North of Washington Street	1,630	*
Emergency Room Driveway	1,160	*

* BC&A, ATR Counts

** From City of Boston 11-hour Turning Movement Counts

The Warren Street/Commonwealth Avenue/Kelton Street intersection was not analyzed for this study because it is approximately one half mile from the site and, as shown later in this report, the SMHW project will add only 22 vehicles during the AM peak and 22 vehicles during the PM peak. BC&A reviewed available City of Boston turning movement counts to determine the percent increase in traffic volumes due to SMHW. The most recent count available at this location was completed in February 1981. Information received from the Boston Transportation Department indicates that this intersection has experienced little change over the years as indicated by turning movement counts done at this location in 1970 and 1976. Based on trends in the area, the intersection volumes in 1988 would be higher than those in 1981, therefore the analysis presented is conservative and traffic generated by SMHW will have less impact. In 1981, about 1,900 vehicles entered this intersection during the AM peak (7:30 AM - 8:30 AM) and about 1,950 during the PM peak (5:00 PM - 6:00 PM). SMHW will only add about one percent to the 1981 traffic volumes, and less to the higher existing volumes. Traffic volumes vary by more than this amount at some intersections in the city. The impacts created by this one percent will be negligible and will not cause any noticeable increase in delay.

The peak hours at the Cambridge Street/Warren Street/Sparhawk Street intersection occur at 7:45 AM - 8:45 AM and 5:00 PM - 6:00 PM while the peak hours at the Cambridge Street/Washington Street/Winship Street intersection occur at 8:00 AM - 9:00 AM and 5:00 PM - 6:00 PM. Using the peak hour information available at the study area intersections, the volumes were balanced and adjusted to present worst case peak hours. These peak hour volumes are shown in Figures III-1 and III-2.

Peak hour counts were taken both when the Brighton High School was and was not in session. The traffic volumes at the intersection show little variation; however, the pedestrian and school bus activity increased when the high school was in session.

The number of buses and pedestrians and their movements at the Cambridge Street/Warren Street/Sparhawk Street intersection were recorded due to the close proximity of the Brighton High School and the William Taft Junior High School on Warren Street. During the AM peak hour, 254 pedestrians crossed Cambridge Street and 263 pedestrians crossed Warren Street. The majority of pedestrians who crossed Cambridge Street on the east side of Warren Street, also crossed Warren Street. During the PM peak hour, 29 pedestrians crossed Cambridge Street while 26 crossed Warren Street. The majority of the pedestrians crossing Cambridge Street arrived at this intersection via MBTA buses. The pedestrian and school bus (including directions of arrivals) counts are summarized in Figure III-3.

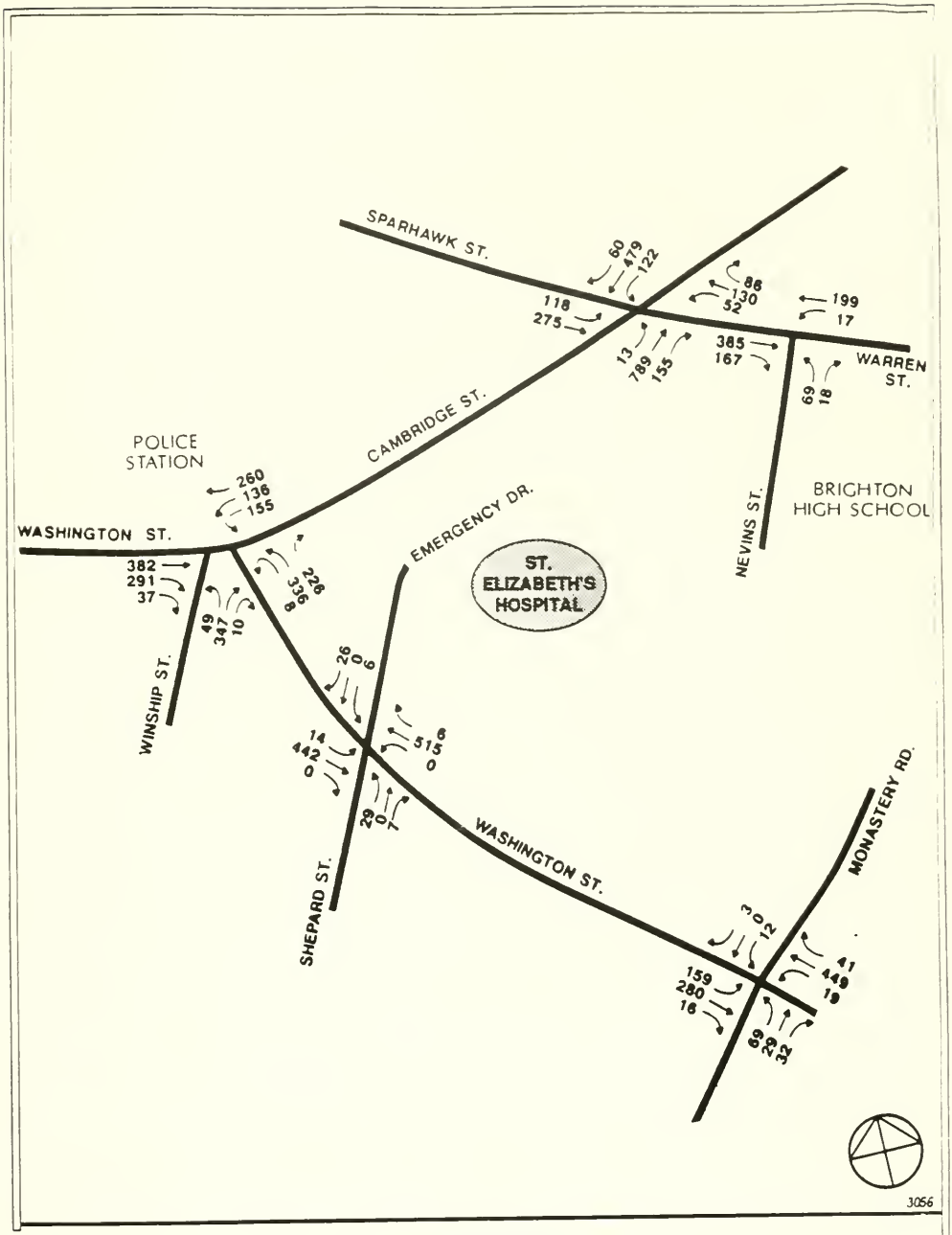

FIGURE III-1
1989 AM PEAK HOUR TURNING MOVEMENTS, ADJUSTED AND BALANCED

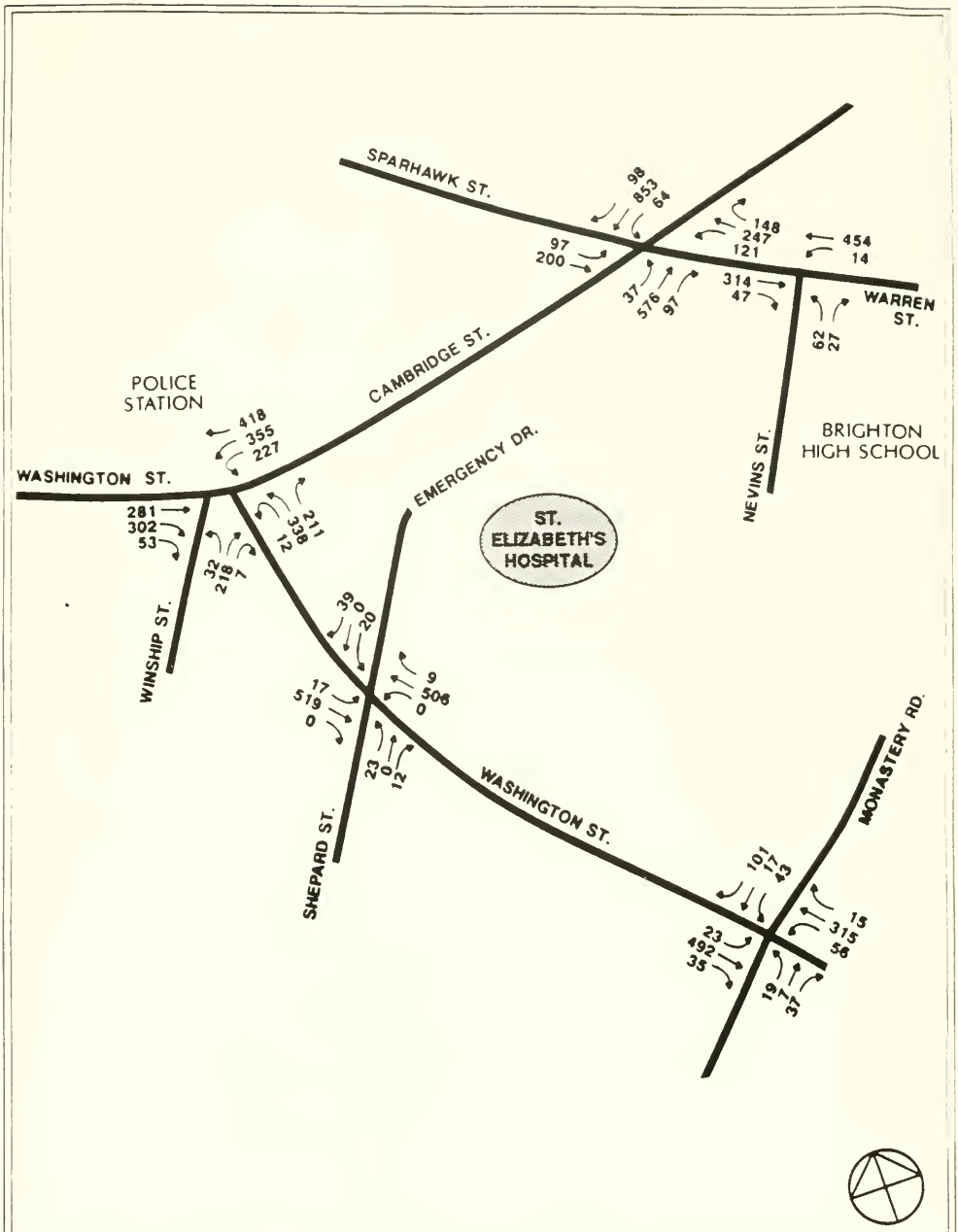

FIGURE III-2
1989 PM PEAK HOUR TURNING MOVEMENTS, ADJUSTED AND BALANCED

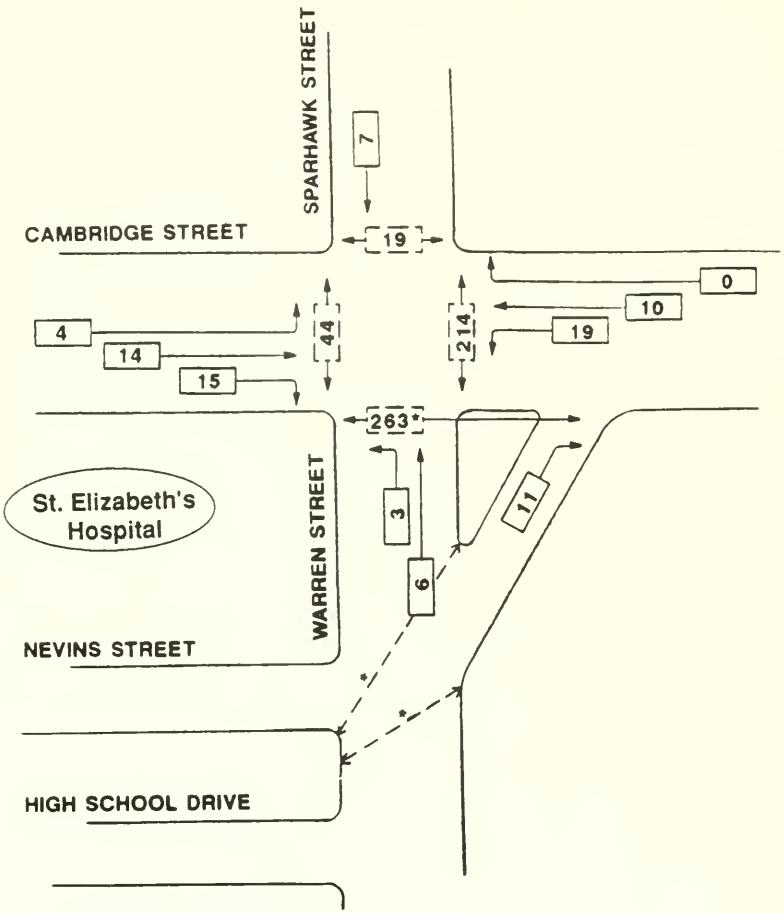

FIGURE III-3
EXISTING AM PEAK HOUR SCHOOL BUS AND PEDESTRIAN COUNTS

In response to comments on the DEIR, BC&A performed a conflict study on Friday, October 20, 1989 to determine the number of times Warren Street, Nevins Street and the high school drive were blocked due to pedestrians during the AM peak hour. The maximum number was 10 times at Warren Street with the average delay being 18 seconds; 8 times at Nevins Street with an average delay of 22 seconds; and 7 times at the high school drive with an average delay of 22 seconds. The maximum delay to vehicles caused by pedestrians was 58 seconds. Queue lengths were also recorded for vehicles turning onto Warren Street (average 4 vehicles, maximum 6 vehicles), Nevins Street (average 3 vehicles, maximum 6 vehicles) and the high school drive (average 3 vehicles, maximum 6 vehicles). The conflict locations are shown in Figure III-4 and the information is summarized in Table III-2.

Based on the Vanesse Hangen Brustlin (VHB) study prepared for the MOB, approximately 35 percent of vehicles entering the SEH campus from Nevins Street originate in the west. The proposed extension of Nevins Street to Washington Street will reduce the number of vehicles entering via Warren Street; therefore, reducing the number of conflicts between vehicles and pedestrians.

On April 24, 1989, representatives from BC&A, SMHW and SEH met with Ms. Juliette Johnson, Headmaster of Brighton High School and Mr. Albert Vasquez, Headmaster of William Taft Junior High School to discuss the proposed hospital relocation and its effects on area traffic. The school schedules and pedestrian activity at the Cambridge Street/Warren Street/Sparhawk Street intersection were discussed.

Brighton High School students arrive between 7:15 AM - 8:05 AM and depart between 1:55 PM - 2:30 PM, while William Taft Junior High School students arrive between 8:00 AM - 8:30 AM and depart between 2:30 PM - 3:00 PM. The modes of transportation used by students include school bus, MBTA bus, cars, and walking. Field observations indicate Brighton High School students who use MBTA buses cross at Warren Street. It appears that the William Taft Junior High students deboard the MBTA bus at Dustin Street and access the school from the east wing using a pedestrian walkway.

The only concern school administrators could foresee were future school assignments that might increase the number of walkers. The administrators indicated they would like to see yellow school buses used because the use of public buses does not allow students to cross without concern of oncoming motorists. There are no traffic monitors, but high school and middle school students seem to be safety conscious, as indicated by accident records which show no accidents involving pedestrians.

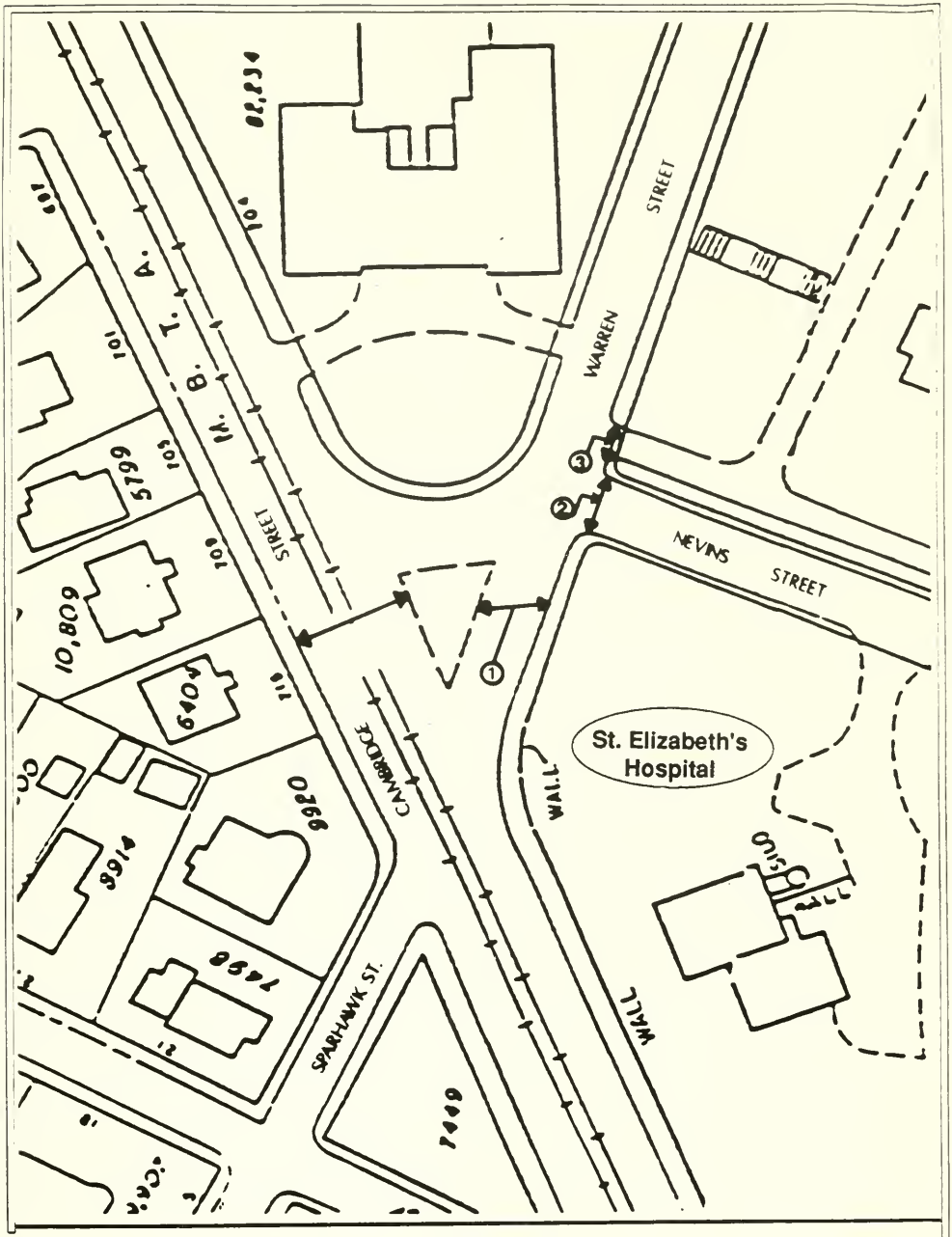

FIGURE III-4
LOCATIONS OF PEDESTRIAN AND VEHICLE CONFLICT STUDY

TABLE III-2
PEDESTRIAN AND VEHICLE CONFLICT STUDY*

		DELAY		QUEUE	
Movement**	Times Blocked	Average	Maximum	Average	Maximum
1	10	18.4 sec.	58 sec.	4	6
2***	8	22.2 sec.	58 sec.	3	6
3***	7	21.7 sec.	58 sec.	3	6

* Based on counts performed by BC&A on Friday, October 20, 1989.

** See Figure IV-5 for locations of observed movement.

*** When movements 3 or 2 are blocked, this affects movements 2 and 1.

The only time students and traffic generated by SEH are concurrent is during the AM peak hour. The new access to the campus will remove about 35 percent of the existing and future traffic from the Warren Street/Nevins Street intersection. Approximately 160 vehicles (94 vehicles currently using this access, 37 vehicles from the MOB, and about 30 vehicles from St. Margaret's Hospital) will instead use the Washington Street access, therefore reducing the potential for vehicle/pedestrian conflicts and improving pedestrian safety at the Cambridge Street/Warren Street/Sparhawk Street intersection. The relocation of SMHW should, therefore, have little or no impact on the pedestrian traffic.

The patterns the school buses follow are illustrated in Figure III-5. Backups, delays and queueing due to a school bus only occurred once during the aforementioned conflict study. The number of times streets in the vicinity of the site are blocked, the delays and queue lengths experienced are summarized in Table III-2.

Pedestrians cross the Warren Street/Cambridge Street/ Sparkhawk Street intersection in platoons after deboarding MBTA busses. This occurs about 10 times during an hour based on BC&A observations. There will be 55 additional vehicles at the Warren Street/Nevins Street intersection and only 40 at the Warren Street/Cambridge Street/Sparhawk Street intersection due to SMHW during the AM peak, when there is the highest pedestrian volume. However, the new access will reroute 94 existing vehicles from the Warren Street/Nevins Street intersection, therefore, the additional vehicles due to SMHW will not be noticeable. Currently vehicles allow students to cross the streets and the decrease of 39 vehicles from current volumes at the Warren/Cambridge/Sparhawk intersection will reduce pedestrian vehicle conflicts. Most junior high school students do not cross at this intersection. They cross at the Dustin Street/Cambridge Street intersection where there is a pedestrian signal. The accident data available for this location indicates there is not a safety issue regarding pedestrians, with no reported accidents involving pedestrians.

3.3 Public Transportation

Although not located on the same street as any MBTA subway or trolley lines, two MBTA bus lines have stops adjacent to the campus. MBTA Bus Route 65 travels from Kenmore Square through Brookline and Boston along Washington Street. There are bus stops located at the Washington Street/Monastery Road intersection and at the Washington Street/Cambridge Street intersection. These two locations afford reasonable

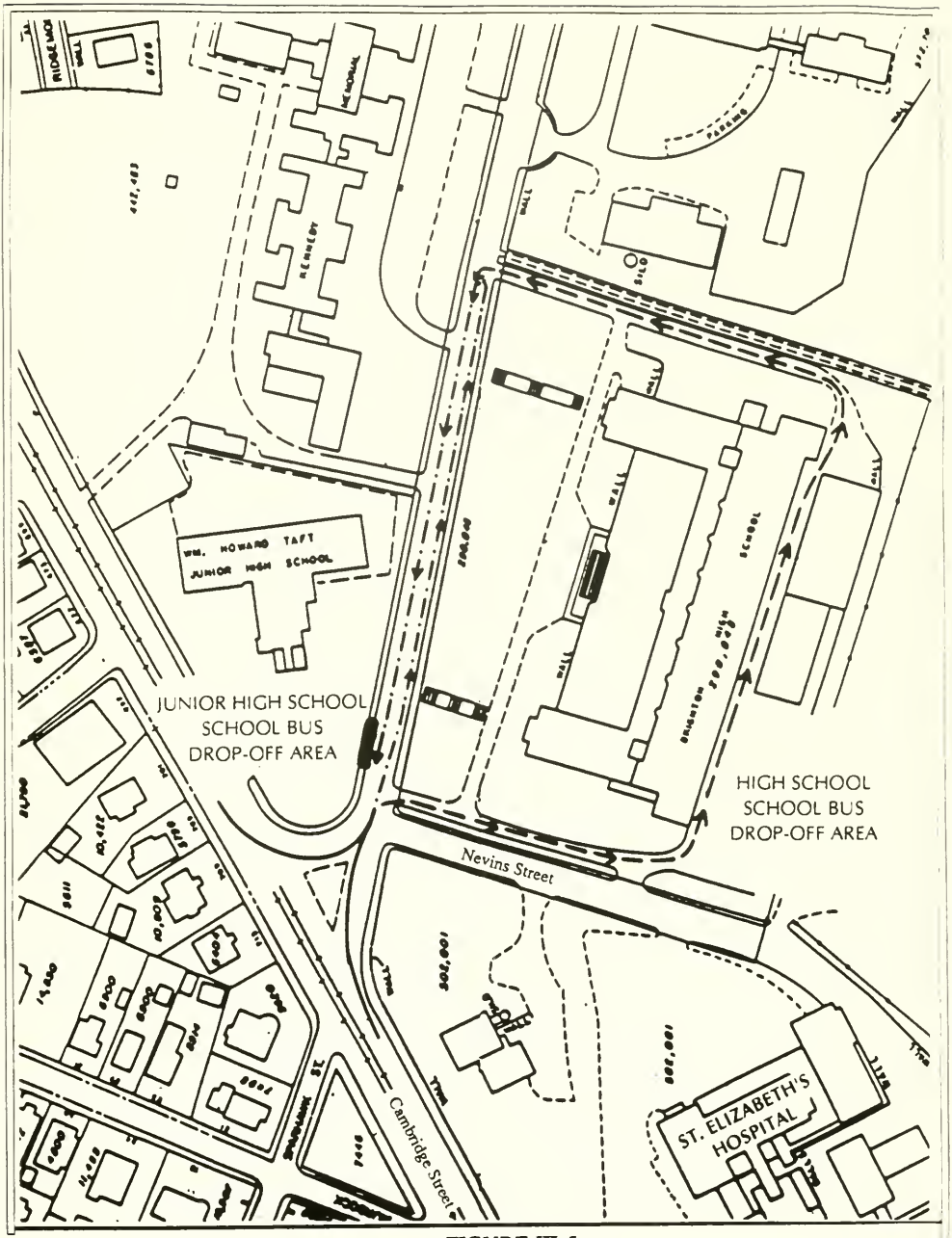

FIGURE III-5
AM SCHOOL BUS DROP-OFF PATTERN FOR
BRIGHTON HIGH AND TAFT JUNIOR HIGH SCHOOLS

access to the SEH campus. Bus Route 57 provides a direct link to the SEH campus. Route 57 originates in Kenmore Square and terminates in Watertown Square, travelling along Commonwealth Avenue to Brighton Avenue to Cambridge Street. There are two stops (Cambridge/Warren Street and Cambridge/Washington Street) which allow easy access to the campus.

The MBTA Boston College (B) Green Line travels along Commonwealth Avenue and stops at Warren Street and Washington Street. Both of these stops are about a half mile walk from SEH. Some employees and patients will utilize this mode to travel to SEH, but this walking distance will discourage a portion of them.

SMHW monitored the patient modes of travel to their current location between August 30 and September 13, 1989. The following indicates transportation modes utilized by patients to and from the existing facility during the AM and PM peaks for this period.

Based on this information, over a two-week period, there is less than 5 percent during the AM peak, less than 4 percent during the PM peak, and about 7 percent using public transportation during an average day. The nearest public transportation lines are Bus Routes 15 and 16 and the commuter rail which stop in Upham's Corner, about 1500 feet from St Margaret's, and the Red Line at Savin Hill which is about 3500 feet (0.7 miles) away. The SEH facility is served by Bus Routes 57 and 60, which stop at Washington and Warren Streets (about 500 feet away) and the Green Line B Train on Commonwealth Avenue which stops at Washington Street (about 3200 feet away) and Warren Street (about 2300 feet away). The closer location to transit at SEH will allow an increased usage of public transportation. Therefore a 5% reduction in traffic has been assumed for increased ridership. The public transit routes are depicted in Figures III-6 and III-7.

Time Period	Walk	Bus	Car	Taxi	Ambulance	Not Specified
7 AM - 9 AM	8	5	88	3	2	1
4 PM - 6 PM	7	1	16	3	0	2
All Hour Totals	57	29	265	36	12	4

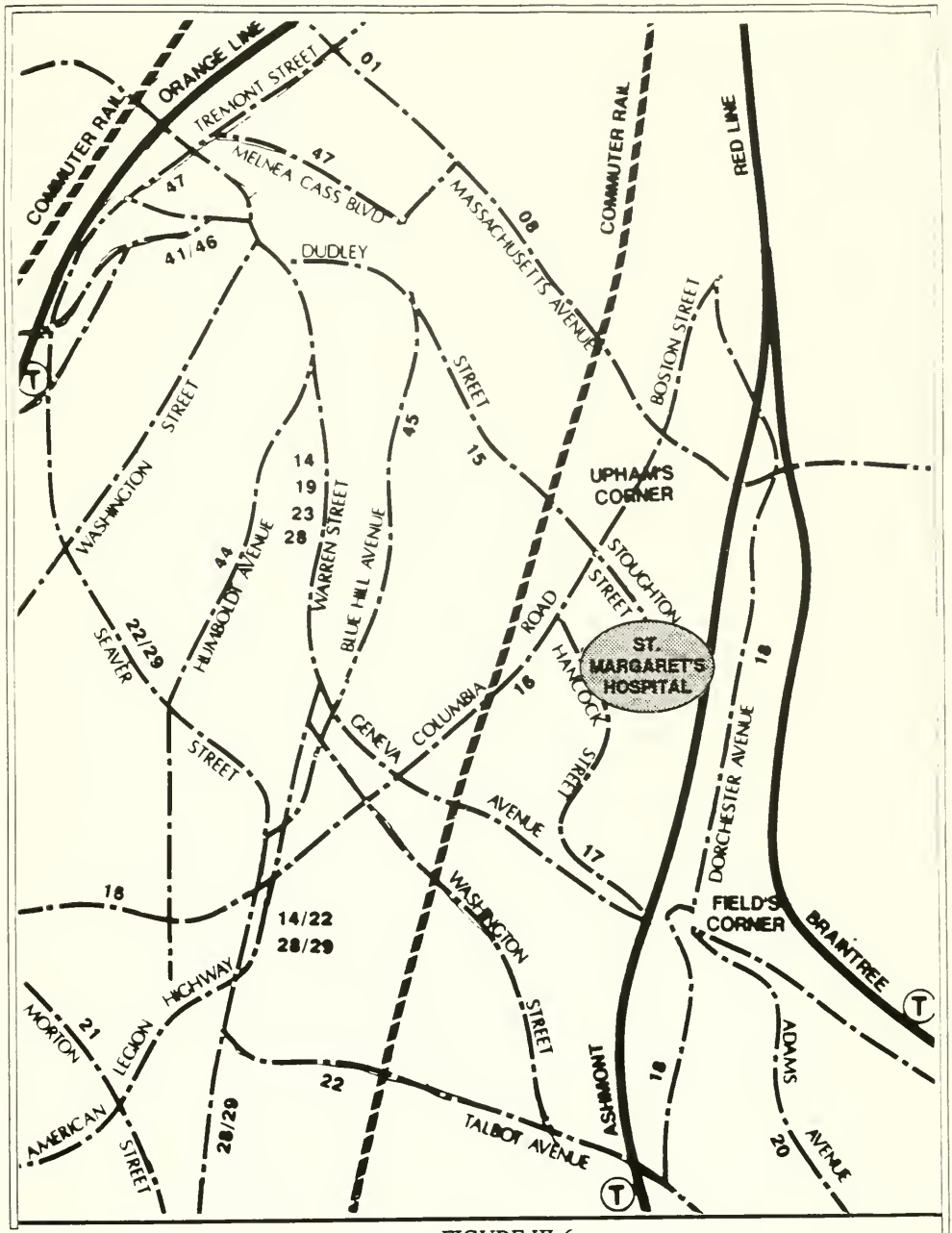

FIGURE III-6
PUBLIC TRANSPORTATION IN DORCHESTER
AT EXISTING SMHW FACILITY

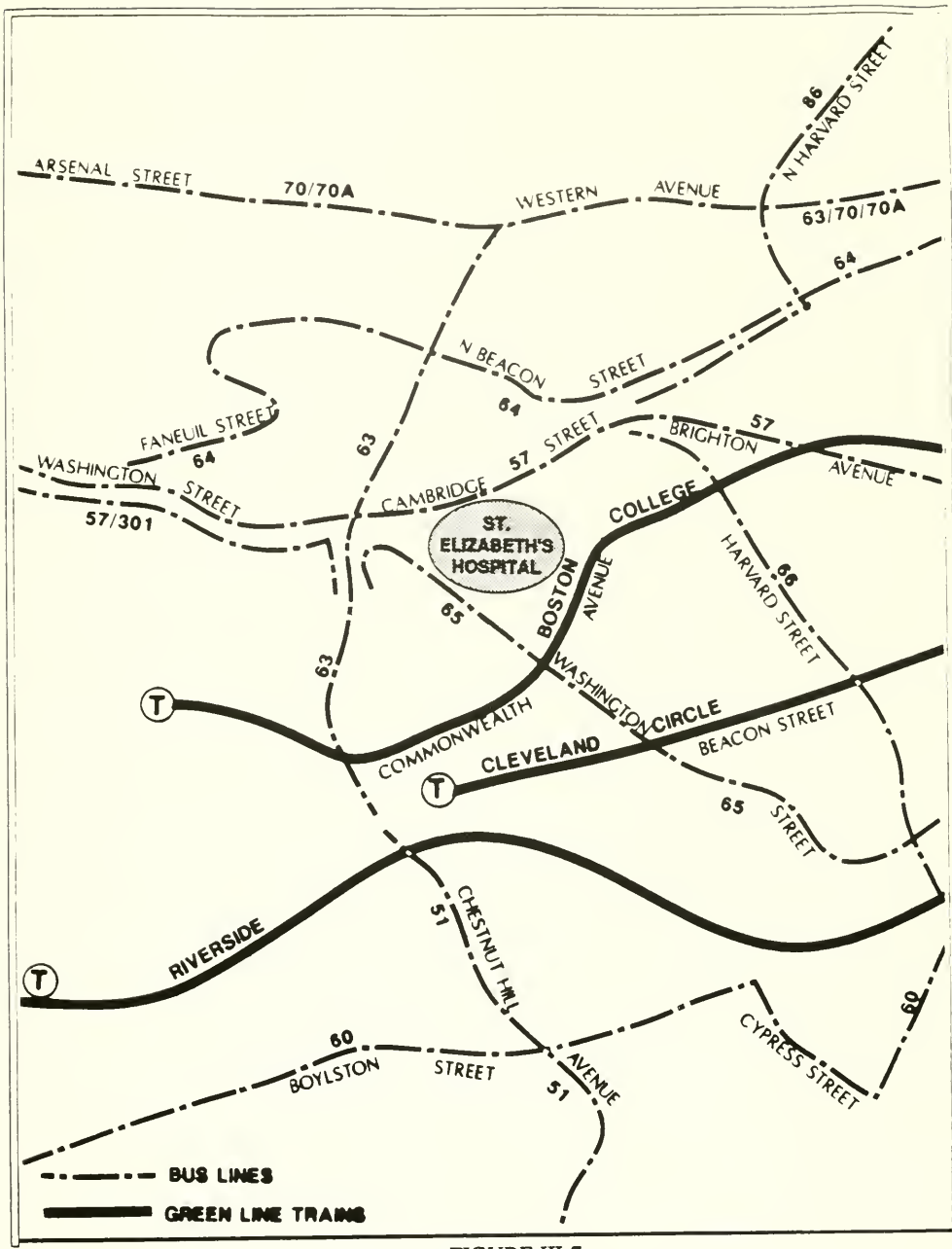

FIGURE III-7
PUBLIC TRANSPORTATION IN ALLSTON/BRIGHTON
AT ST. ELIZABETH'S HOSPITAL

3.4 Existing Level of Service

Level of service (LOS) is a quantitative measure used to describe the operation of an intersection. Level of service values range from A to F (A representing very good operation and F representing very poor operation). Level of service calculations are performed using methods in the 1985 Highway Capacity Manual (HCM) published by the Transportation Research Board. For signalized intersections, level of service is defined in terms of average stopped delay which is determined using an analysis method relating traffic volumes, geometric conditions, and traffic control conditions. Delay is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The ratio of existing traffic volume to available capacity (volume/capacity ratio) provides a measure for the intensity of traffic loading relative to the ability of the street to handle the traffic. The number of lanes, presence of turn lanes, type of traffic control, and signal phasing are important capacity determinants. As the volume/capacity ratio (v/c) approaches 1.0, extreme congestion sets in with long backups at signalized intersections. While the v/c ratio is not used to define level of service, it is helpful to evaluate intersections with poor levels of service. The following LOS definitions are associated with signalized intersections:

LOS	Volume/ Capacity Ratio	Avg. Standing Delay Seconds/Vehicles	General Description Signalized Intersections
A	0 - 0.60	0 - 5.0	Free flow
B	0.61 - 0.70	5.1 - 15.0	Stable flow (slight delays)
C	0.71 - 0.80	15.1 - 25.0	Stable flow (acceptable delays)
D	0.81 - 0.90	25.1 - 40.0	Approaching unstable flow (tolerable delay - occasionally wait through more than one signal cycle before proceeding)
E	0.91 - 1.00	40.1 - 60.0	Unstable flow (intolerable delay)
F	> 1.00	60.1 +	Forced flow (jammed)

Level of service analysis for two-way stop controlled intersections assumes that left turns from the major street are affected by opposing major street through traffic. Traffic on the minor street is affected by all conflicting traffic. The methodology is based on gaps in the major street traffic in which a vehicle can pass through or enter the major street. The reserve capacity is related to the capacity of these gaps; as the gaps become smaller or less frequent, the reserve capacity becomes smaller and traffic backups will occur. Levels of service for unsignalized intersections have been defined as follows:

Reserve Capacity Pass. Cars Per Hour	Level of Service	Expected Delay to Minor Street Traffic
> 400	A	Little or no delay
300 - 399	B	Short traffic delays
200 - 299	C	Average traffic delays
100 - 199	D	Long traffic delays
0 - 99	E	Very long traffic delays
*	F	*

Level of service analyses were performed for existing traffic volumes at the study area intersections. Table III-3 summarizes the results.

The analyses at the Warren Street/Cambridge Street/Sparhawk Street intersection, which is in the vicinity of the Brighton High School and the William Howard Taft Junior High School included an exclusive pedestrian phase 50 percent of the cycles for all AM conditions and 25 percent for all PM conditions. This is conservative based on the MBTA's scheduled headway of 6 minutes on the number 57 bus line. There are 45 - 80 second cycle lengths during one hour. Incorporating a pedestrian phase every other cycle (50 percent) during the AM peak will allow for 22 - 18 second pedestrian phases. The running headway between busses is 6 minutes, therefore in one hour there will only be 10 periods when pedestrians cross. The PM peak hour analysis allows 11 - 18 second pedestrian phases which is conservative based on existing pedestrian volumes at this lcoation.

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* When demand volume exceeds the capacity of the lane, extreme delays will be encountered with queuing which may cause severe congestion affecting other traffic movements in the intersection. This condition usually warrants improvement to the intersection.

TABLE III-3

EXISTING LEVEL OF SERVICE

Unsignalized Intersection	AM LOS	AM Delay	AM ARC	PM LOS	PM Delay	PM ARC
Nevins Street/Warren Street						
NB Warren Street LT	A	4.69	740	A	3.94	914
NB Nevins Street LT-RT	B	10.81	333	B	11.78	306
Washington Street/St. Elizabeth's Emergency Drive/Shepard Street						
EB Washington Street LT	A	4.69	767	A	4.69	791
NB Shepard Street LT-TH-RT	C	15.59	231	C	15.79	273
SB St. E's Drive LT-RT	A	7.62	473	B	10.72	402

Signalized Intersection	LOS	Delay	V/C	LOS	Delay	V/C
Cambridge Street/Warren Street/ Sparhawk Street	C	19.31	0.89	C	21.55	0.91
EB Cambridge Street LT-TH-RT	C	15.17	0.86	B	12.74	0.76
WB Cambridge St. LT-TH-RT	C	19.51	0.87	C	20.56	0.90
NB Warren Street LT-TH	C	17.11	0.56	D	36.44	0.93
NB Warren Street RT	B	14.16	0.20	C	16.34	0.32
SB Sparhawk Street LT-TH	D	31.67	0.91	D	31.30	0.87
Cambridge Street/Washington Street/ Winship Street	C	24.61	0.85	C	21.85	0.89
EB Washington Street LT	D	39.99	0.93	C	22.64	0.62
EB Washington Street TH-RT	D	28.88	0.90	D	27.98	0.89
WB Washington Street LT-TH	D	35.55	0.93	D	32.95	0.89
WB Washington Street RT	C	20.81	0.69	C	20.51	0.61
NB Winship Street LT-TH-RT	C	17.98	0.74	C	19.10	0.64
SB Cambridge Street LT	D	26.54	0.75	E	41.84	0.89
SB Cambridge Street TH	B	9.04	0.24	C	15.29	0.69
SB Cambridge Street RT	A	2.84	0.28	A	3.90	0.46
Washington Street/Monastery Rd	B	7.66	0.66	B	6.57	0.57
EB Washington St LT-TH-RT	B	8.88	0.76	B	5.35	0.59
WB Washington St LT-TH-RT	B	5.21	0.57	A	4.57	0.48
NB Monastery Road LT-TH-RT	B	12.64	0.41	B	11.57	0.20
SB Monastery Road LT-TH-RT	B	11.11	0.05	B	13.59	0.51

LOS - Level of Service
Delay - Average seconds of delay per vehicle
ARC - Available Reserve Capacity
V/C - Volume/Capacity Ratio

LT - Left
TH - Through
RT - Right

3.5 Level of Service Summary

The analyses performed for the existing conditions indicate that overall traffic operations at the signalized study area intersections are at acceptable levels of service (LOS) C or better) during both the AM and PM peak hours.

At the Cambridge Street/Warren Street/Sparhawk Street intersection, all movements operate at LOS C or better except for the Sparhawk Street left turn and through movement during the AM and PM peak hours, and the Warren Street left turn and through movement during the PM peak hour. These movements operate at LOS D. During the AM peak, the maximum queue length on any approach is seven vehicles (150'±) while during the PM peak, the maximum queue length is ten vehicles (220'±). Due to the high volumes of pedestrians at this intersection, an exclusive pedestrian phase (no vehicular movements allowed) was included in the analysis as described previously. The pedestrian phases included in the analysis will allow for the safe crossing of the pedestrians during the AM peak hour and will safely accommodate a greater volume. Most pedestrians at this intersection do not utilize this phase during the AM peak hour.

At the Cambridge Street/Washington Street/Winship Street intersection, all movements operate at LOS C or better during the AM peak hour except for all Washington Street eastbound movements, the Washington Street westbound left turn movement, and the Cambridge Street left turn movement which operate at LOS D. During the PM peak hour, the intersection operates at an overall LOS C; however, the Washington Street eastbound through and right turn movements, as well as the Washington Street westbound lefts operate at LOS D. The Cambridge Street left turns operate at LOS E during the PM peak due to the high opposing volumes from Winship Street. At this location even with some movements operating at LOS D, the maximum queue lengths are 12 vehicles (260'±).

The Washington Street/Monastery Road intersection operates at an overall LOS B during both the AM and PM peak hours and no movements operate at lower than LOS B. Maximum queue lengths expected on any approach do not exceed five vehicles (110'±) during the peak hours.

The unsignalized level of service analyses done at the Nevins Street/Warren Street intersection and the Washington Street/St. Elizabeth's Emergency Drive/Shepard Street intersection indicate that all movements operate at LOS C or better during the peak hours. It should be noted that the proximity of the Cambridge Street/Warren Street/Sparhawk Street intersection to the Nevins Street/Warren Street intersection could

impede the left turning traffic (St. Elizabeth's Hospital traffic) from Nevins Street onto Warren Street. The maximum queue length calculated for the Cambridge Street/Warren Street/Sparhawk Street intersection is 13 vehicles (290'±) which would block Nevins Street. This condition will occur only during the PM peak hour due to the higher volumes on the Warren Street approach.

The proposed extension of Nevins Street to Washington Street will cause vehicles to reroute. Approximately 35 percent of all vehicles using Nevins Street have origins or destinations in the west, based on the VHB study and this study. Based on the location and ease of access, the 35 percent will reroute and use the new Washington Street/Nevins Street intersection. The rerouted AM and PM peak hour traffic is shown in Figures III-8 and III-9.

Level of service analyses were performed at all study area intersections with the new access. As shown in Table III-4, the expected levels of service will improve at all intersections except for the Washington Street/St. Elizabeth's Emergency Drive/Shepard Street intersection which changes minimally.

3.6 Accident/Safety Analysis

The number of reported accidents - approximately six per year at the Cambridge Street/Warren Street/Sparhawk Street intersection and seven per year at the Cambridge/Washington Street/Winship Street intersection - indicates that low accident rates exist at the study area intersections. The reported accidents also indicate that no pedestrians were involved, although there are high volumes of pedestrians crossing Cambridge Street and Warren Street to gain access to the schools in the area.

Accident data for the study area was obtained from the Massachusetts Department of Public Works (MDPW) for the Cambridge Street/Warren Street/Sparhawk Street and the Cambridge Street/Washington Street/Winship Street intersections. Table III-5 lists the summary of accident data for the latest years available.

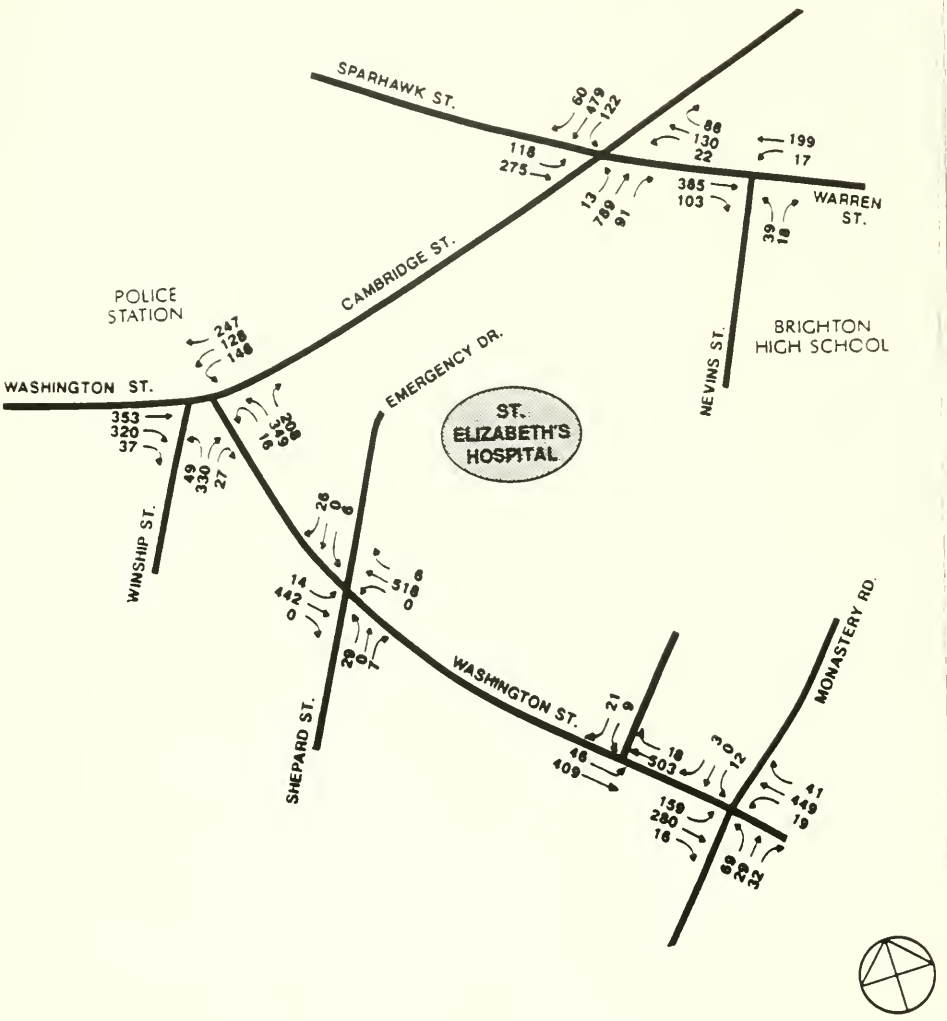

FIGURE III-8
1989 AM PEAK HOUR TURNING MOVEMENTS WITH REROUTED TRAFFIC

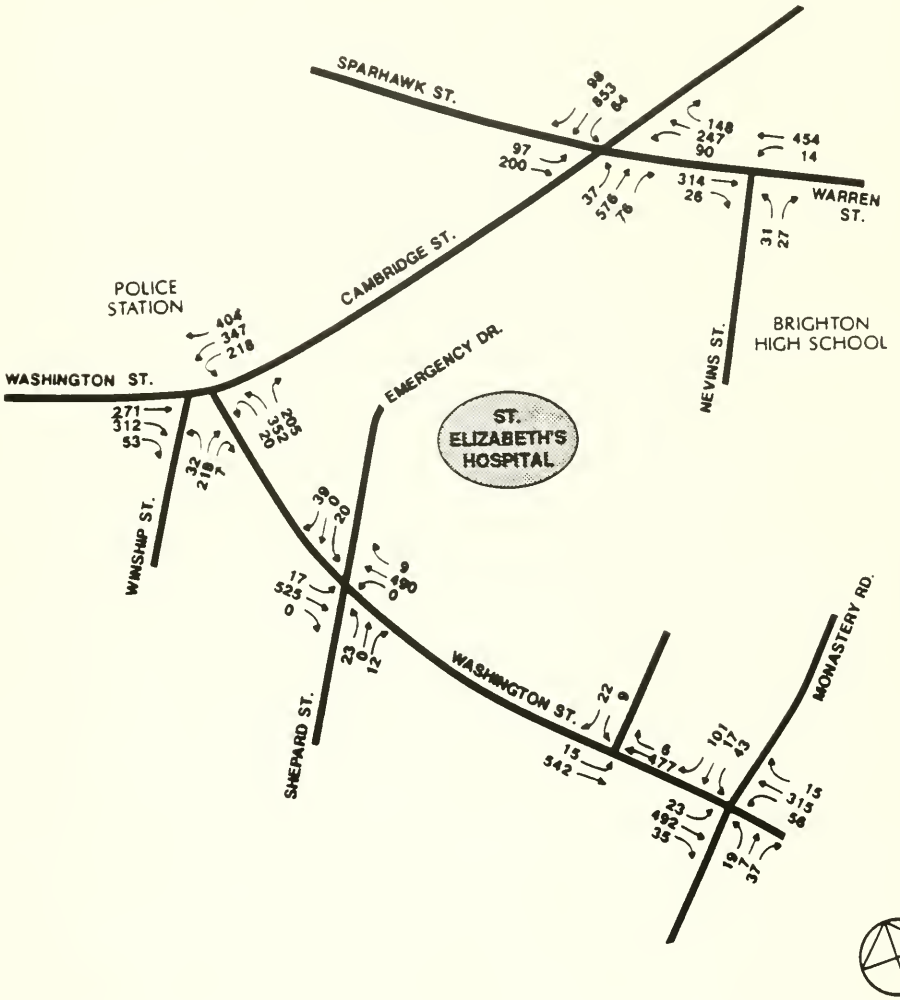

FIGURE III-9
1989 PM PEAK HOUR TURNING MOVEMENTS WITH REROUTED TRAFFIC

TABLE III-5
ACCIDENT SUMMARY

Cambridge Street/Washington Street/Warren Street/
Cambridge Street/Sparhawk Street/Winship Street Intersections

	1983	1984	1985	1984	1985
Number of Accidents	7	5	6	9	5
Accidents Per Day of Week					
Sunday	0	2	0	2	1
Monday	2	1	1	2	0
Tuesday	1	1	0	1	1
Wednesday	0	0	0	3	0
Thursday	1	0	0	0	1
Friday	2	1	3	0	0
Saturday	1	0	2	1	2
Type of Accident					
Property Damage Only	4	4	3	7	4
Personal Injury	3	1	3	2	1
Fatality	0	0	0	0	0
Type of Collision					
Rear End	3	1	1	5	0
Angle	4	2	5	1	4
Head On	0	0	0	0	0
Other	0	2	0	1	1
Hit Fixed Object	0	0	0	2	0
Peak Hour Accidents					
6:00 AM - 9:00 AM	2	2	3	1	0
11:00 AM - 1:00 PM	0	1	1	0	0
3:00 PM - 6:00 PM	1	0	0	2	1
Roadway Conditions					
Wet	N/A	2	2	3	2
Dry	N/A	3	4	6	3

N/A = Not Available

The following is a summary of available accident data:

Three-Year Period for the Cambridge Street/
Warren Street/Sparhawk Street Intersection

- A total of 18 accidents were reported over a three-year period (six per year).
- 72 percent (13 of 18) of the reported accidents occurred during the working week
- 61 percent (11 of 18) involved property damage only while 39 percent (7 of 18) involved personal injury. No fatalities were reported.
- 28 percent (5 of 18) were rear-end collisions
- 61 percent (11 of 18) were angle collisions
- 39 percent (7 of 18) occurred during the AM peak
- 11 percent (2 of 18) occurred during the midday peak
- 6 percent (1 of 18) occurred during the PM peak
- 36 percent (4 of 11) occurred on wet pavement
- 64 percent (7 of 11) occurred on dry pavement
- No pedestrians were involved in accidents
- 0.46 Accidents Per Million entering vehicles

Two-Year Period at the Cambridge Street/
Washington Street/Winship Street Intersection

- A total of 14 accidents were reported over a two-year period (seven per year).
- 57 percent (8 of 14) occurred during the work week
- 79 percent (11 of 14) involved property damage only while 21 percent (3 of 14) involved personal injury. No fatalities were reported.
- 36 percent (5 of 14) were rear-end collisions
- 36 percent (5 of 14) were angle collisions
- 14 percent (2 of 14) hit fixed objects
- 7 percent (1 of 14) occurred during the AM peak

- 0 percent occurred during the midday peak
- 21 percent (3 of 14) occurred during the PM peak
- 36 percent (5 of 14) occurred on wet pavement
- 64 percent (9 of 14) occurred on dry pavement
- No pedestrians were involved in accidents
- 0.54 Accidents Per Million entering vehicles

4.0 TRIP GENERATION AND DIRECTIONAL DISTRIBUTION

4.1 Existing Trip Generation

Utilizing information received from SMHW, BC&A has determined the trip generation associated with the hospital. SMHW performed traffic counts at their main parking garage and supplied information on their other lots which are utilized by staff, patients, and visitors for the week of November 17-23, 1987. The following is a summary of each parking facility and its current utilization.

Facility	Size and Utilization
Main Garage	100 spaces available; used by staff, patients and visitors 24 hours per day
Lower Garage	35 spaces available, average 31 occupied at 9 AM; used by day shift employees only; open 7 AM - 5:30 PM
Windermere Lot	74 spaces available; average 40 occupied at 9 AM; used by day shift employees only; open 7 AM - 5:30 PM
Cushing Street Lot	20 spaces available; average 20 spaces occupied at 9 AM; used by employees for two shifts; open 7 AM - 11 PM
Freeport Lot	100 spaces available; approximately 50 occupied at 9 AM; an off-site lot in which shuttle service is provided to the hospital; open 7 AM - 5:30 PM
On-Street Parking	50 spaces; it is estimated 50 on-street parking spaces are used by patients, visitors and staff.

The average daily trip generation for the existing 114-bed facility at SMHW is based on the traffic count taken at the main garage. Table IV-1 shows the total trip generation, and the breakdown for each parking facility.

To determine the number of peak hour trips associated with SMHW, an investigation of parking garage counts, and other lot information was completed. Table IV-2 summarizes the number of trips associated with each lot for the periods of 7:00 AM - 9:00 AM and 3:30 PM - 5:30 PM.

TABLE IV-1
EXISTING DAILY TRIP GENERATION
ST. MARGARET'S HOSPITAL FOR WOMEN

Facility	Daily Trips	
Main Garage	550	(from 11/87 garage counts)
Lower Garage	90	(35 spaces x 2 trips/space + 20 miscellaneous trips)
Windermere Lot	100	(40 spaces x 2 trips/space + 20 miscellaneous trips)
Cushing Street Lot	90	(20 spaces x 4 trips/space + 10 miscellaneous trips)
Freeport Lot	110	(50 spaces x 2 trips/space + 10 shuttle trips)
On Street Parking	300	(50 spaces x 2 trips/space x 3 turnovers)
Miscellaneous	160	Taxis-40/day; deliveries-20/day; ambulances-20/day.
TOTAL	1,400 trips/day	

TABLE IV-2
EXISTING PEAK PERIOD TRIP GENERATION
ST. MARGARET'S HOSPITAL FOR WOMEN

Facility	7:00 AM - 9:00 AM			3:30 PM - 5:30 PM		
	In	Out	Total	In	Out	Total
Main Garage	50	42	92	29	36	65
Lower Garage	31	0	31	0	31	31
Windermere Lot	40	0	40	0	40	40
Cushing Lot	20	0	20	20	20	40
Freeport Lot	50	10	60	10	50	60
On-Street Parking/ Miscellaneous	10	10	20	30	10	40
TOTAL	201	62	263	89	187	276

Peaking characteristics for SEH and SMHW were determined to be similar. Approximately 65 percent of the two-hour volumes were peak hour trips at SMHW, and 56 percent of the two-hour volumes were peak hour trips at SEH. When SMHW relocates to the SEH campus, it is assumed that the peaking characteristics of SEH will be taken on by SMHW due to the availability of public transportation, the coincidental shift times, the possible overlap of personnel and the greater usage of SMHW by the Brighton/Allston residents. Applying the SEH peaking characteristics (56% of the two-hour volume equals the peak hour volume) to the two-hour volumes at SMHW yields the peak hour trips shown in Table IV-3.

TABLE IV-3
EXISTING PEAK HOUR TRIP GENERATION
ST. MARGARET'S HOSPITAL FOR WOMEN

AM			PM		
In	Out	Total	In	Out	Total
113	35	148	50	105	155

4.2 Proposed Trip Generation

To determine the number of trips associated with the new SMHW, an average trip rate per bed was determined for the existing hospital. This rate is 12.17 trips per day per bed which is within the range (3.00-32.83) of average daily rates and slightly higher than the average rate (11.75 trips per day per bed) as published by the Institute of Transportation Engineers (ITE) Handbook Trip Generation, 4th Edition. Applying this rate to the number of beds (98) yields 1,194 trips associated with SMHW for the average weekday. However, due to the availability of public transportation (MBTA buses) servicing the SEH campus, it is assumed an additional five percent or a total of 10 percent

(currently there is approximately 5% transit usage) of the new trips to the area will be utilizing public transportation*. The number of new trips to the site was therefore reduced to reflect the utilization of public transportation and will be 1,134 (567 in and 567 out) during the average weekday.

The existing AM and PM peak hour trip rates were also determined, using a base of 115 beds. The AM average peak hour rate was determined to be 1.29 trips per bed while the PM average peak hour rate was determined to be 1.35 trips per bed. These rates are slightly higher than the average rates (1.07 and 1.22 trips per bed) published by ITE Trip Generation, 4th Edition. The directional distribution listed in Trip Generation, and those determined at SEH and SMHW are also similar.

Information received from SMHW indicates there will be a net reduction of approximately 25 full time equivalent employees (FTE) during the normal workday (8:00 AM - 4:30 PM) at the hospital. This net reduction in staff is due to the crossover of employees between SMHW and SEH. With this crossover of employees there will be a reduction of trips to and from the site during the peak hours. This reduction in FTEs results in a reduction of 20 vehicles entering during the AM peak and 20 vehicles exiting during the PM peak. A five percent reduction was also applied to the number of new AM and PM peak hour trips expected due to the better availability of public transportation.

Table IV-4 shows the new peak hour trip generation determined by applying the rates to the new 98-bed hospital and adjusting for the reduction of FTE's and the higher utilization of public transportation.

TABLE IV-4
ST. MARGARET'S HOSPITAL FOR WOMEN
PROPOSED PEAK HOUR TRIP GENERATION

AM Peak			PM Peak			Daily		
In	Out	Total	In	Out	Total	In	Out	Total
73	27	100	38	68	106	567	567	1,134

* In addition, by combining the employees from two hospitals at one location, the opportunity for car-pooling will be increased.

4.3 Directional Distribution

The direction of approaches and departures of vehicles associated with the medical office building were determined by VHB in their July, 1987 report. This directional distribution closely follows traffic patterns which currently exist on the study area roadways. BC&A has refined this directional distribution and has distributed trips onto Washington Street eastbound and westbound as well as Winship Street.

Directional distribution for the proposed SMHW was determined in two components: 1) for employees from listings of their addresses for the work-related trips; and 2) for patients and visitors associated with the Hospital from existing travel patterns. Based on the listings of employees' home towns, travel routes were assigned and a directional distribution of employee trips was determined. This distribution is summarized in Figure IV-1. The distribution of the patient and visitor trips to the site will be the same as developed by VHB for the medical office building. This distribution is also summarized in Figure III-8.

In considering the routes to be followed by trips from the Quincy/Randolph/ South Shore area, both travel time and distance were evaluated. The Southeast Expressway and Central Artery are both severely congested in all peak hours. Traffic from the south/southeast will avoid these highways and find routes leading to the Jamaicaway (Route 1) and streets through Brookline such as Lee Street, Chestnut Hill Avenue and Washington Street. (Studies in conjunction with the 1988 U.S. Golf Open Championship at The Country Club in Brookline confirmed that these streets are reasonably free-flowing and have capacity for additional north-south traffic flows.)

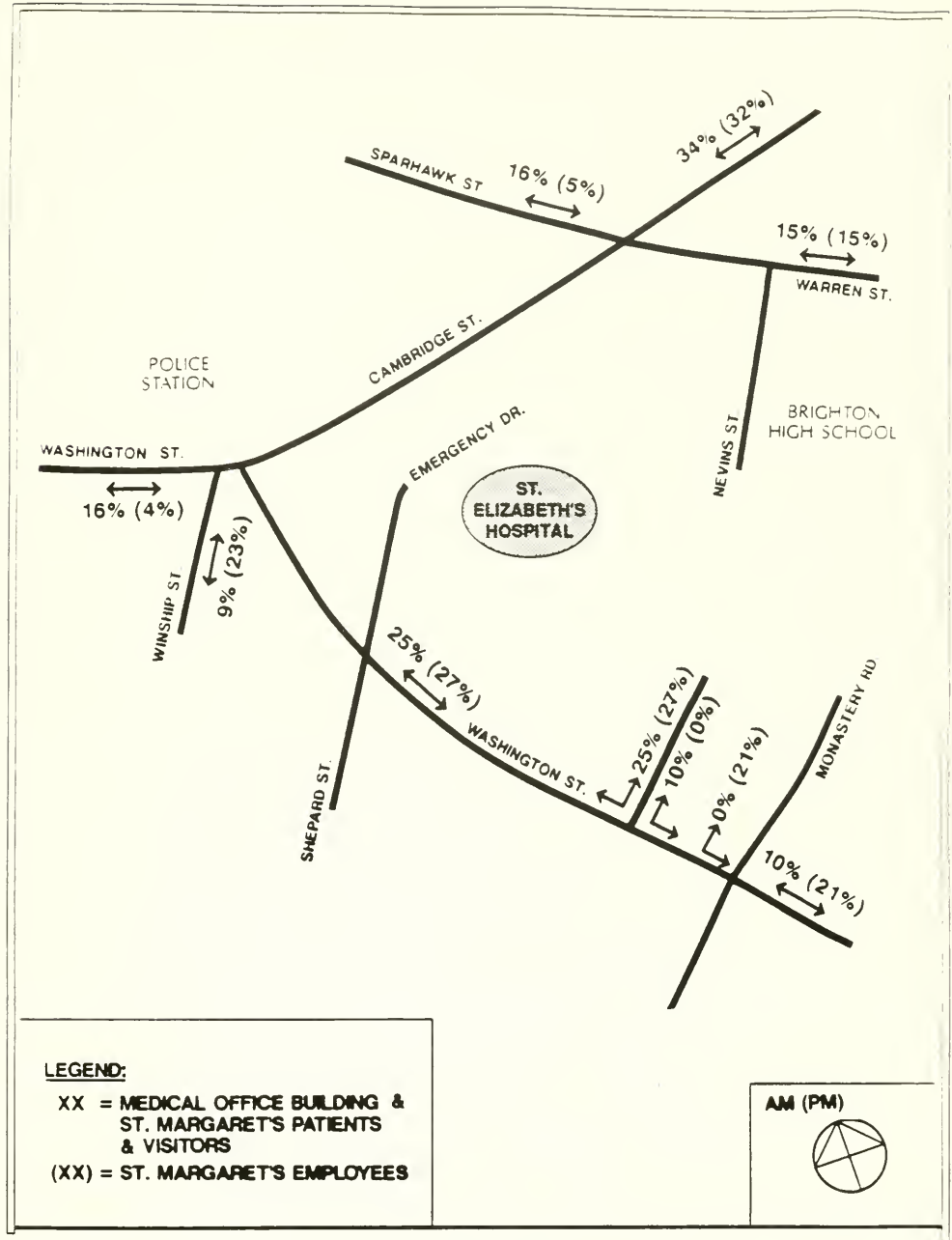

FIGURE IV-1
DIRECTIONAL DISTRIBUTION OF NEW TRIPS

5.0 PARKING

5.1 Existing Parking

The present parking supply available to staff, patients and visitors to SEH is 1,034 spaces. This count includes 41 spaces which are presently being gained through restriping and more efficient use of on-site facilities. Table V-1 lists all the facilities and total number of spaces associated with each, that are presently available or that are projected to be available after the construction of SMHW and a new 330-car garage. The existing parking count on-site exceeds that required by the City of Boston zoning requirements. Institutional uses require one space per 1,000 sf. Based on the parking count provided by SEH, one space per 777 sf is being provided, therefore the zoning requirements for parking are met.

The parking supply and demand survey prepared by VHB identifies parking facilities at SEH which are not utilized to their capacity. The facilities which are not fully utilized are the existing parking garage which was approximately 65 percent occupied and the SEH Foundation lot which were approximately 80 percent occupied. Approximately 185 to 240 parking spaces were unoccupied during the survey conducted by VHB at these locations. Based on BC&A investigations of the site in August, 1988, the parking facilities were not at capacity and the information presented by VHB was determined to be representative of normal operating conditions. No operational changes have occurred at the SEH Foundation lot since the initial information was collected.

The study by VHB indicated adjacent parking which was not fully utilized; this utilization study is summarized in Table V-2.

Table V-2 represents the time periods when the greatest number of parking spaces were available on the SEH Foundation lot and the existing garage. Based on trends in the information, the available spaces at these two facilities was determined for other hours.

BC&A field observations also indicate that the existing pavement markings are faded, causing poor delineation of spaces and subsequently, poor utilization of the parking lot.

TABLE V-1
ST. ELIZABETH'S HOSPITAL
TOTAL PARKING SUPPLY

Parking Facility	Current Number of Parking Spaces	Projected Number of Parking Spaces
Existing Garage	257	257
Emergency Treatment Center	10	10
St. Joseph's Lots	126	105
Mead School Lot	40	40
SEH Foundation Lot	520	507
Elks Lot	68	68
Main Entrance Lot	13	13
New Garage	0	330
TOTAL	1,034	1,330

TABLE V-2
ST. ELIZABETH'S HOSPITAL
ADJACENT EXISTING PARKING SUPPLY

Location	Time	Available Spaces
SEH Foundation Lot	10:00 AM - 11:00 AM	96
	2:30 PM - 3:30 PM	121
Existing Parking Garage	8:30 AM - 9:30 AM	95
	9:30 AM - 10:30 AM	90
	2:30 PM - 3:30 PM	116
	3:30 PM - 4:30 PM	119

Table reprinted from "Traffic Impact and Access Study" by Vanasse Hangen Brustlin, July 1987.

5.2 Projected Parking

Projected parking supply upon completion of SMHW and the new garage totals 1,330 spaces. This count includes a loss of 34 spaces due to new construction (21 spaces in St. Joseph's lots and 13 spaces in the Foundation lot) and 330 spaces to be added as part of the new garage. The peak parking demand for the medical office building determined by VHB is 253± spaces.

To assess the parking requirements of the proposed relocation of SMHW, an investigation of the existing parking accumulation at the Dorchester site was performed November 17-23, 1987, by SMHW. This survey included the following information:

- Spaces occupied at 7:00 AM in the main garage;
- Vehicles entering and exiting in half-hour intervals;
- Spaces occupied at other parking facilities at 9:00 AM; and
- Hours of operation for each facility.

Using this information, parking accumulation for the hospital was determined. The assumptions made to determine the parking accumulation of SMHW are:

- Vehicles entering other lots will follow the arrival/depature patterns of the main garage.

- Employees enter only between 7:00 AM - 9:00 AM and leave between 3:30 PM - 5:30 PM except at the Cushing Street lot where second shift workers are allowed to park.

- On-street arrival patterns for parking will be similar to the main garage patterns.

Based on this information, the peak parking accumulation is 266 parking spaces and this occurs 10:00 AM - 11:00 AM and 3:00 PM - 4:00 PM. The survey information is attached in the Appendix. The parking accumulation at SMHW is shown in Figure V-1.

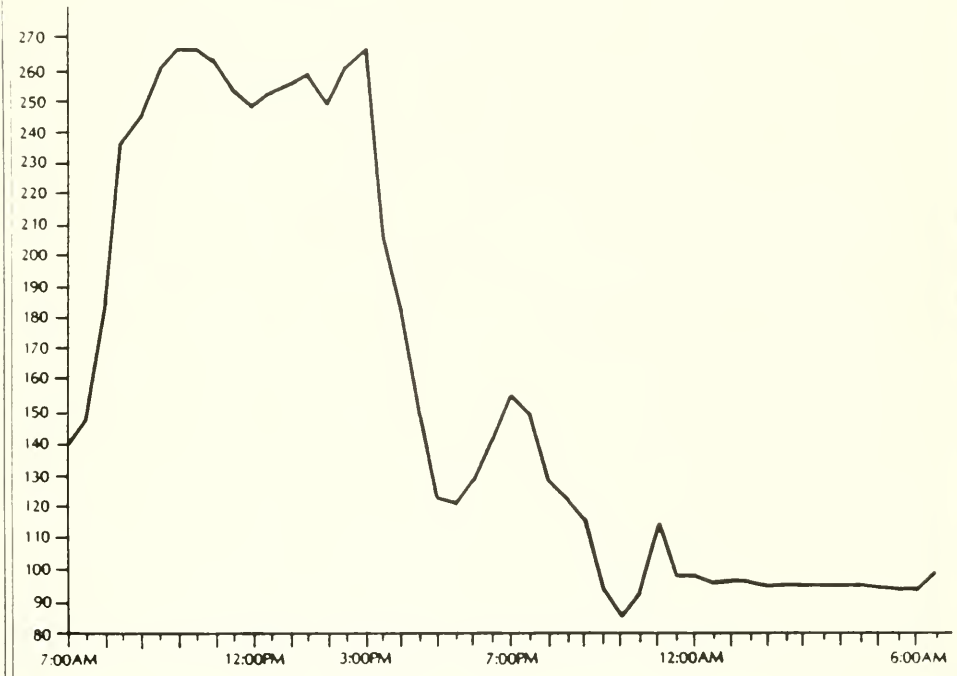

FIGURE V-1
EXISTING PARKING ACCUMULATION

To determine the peak parking requirements for the relocated SMHW, a rate was determined based on the existing 115-bed facility and applied to the new 98-bed facility. The peak parking demand which will be required is 2.31 spaces per bed or 226 spaces.

Information from SMHW indicates there will be an integration of employees between SMHW and SEH which will reduce the equivalent of 25 full-time employees during the normal workday. The number of vehicles requiring parking spaces will therefore be reduced by approximately 20 vehicles during the average workday. Assuming five percent of the employees will opt for public transit now that it is more accessible (or car pooling), the peark parking demand will be further reduced. Utilizing these reduction factors, the peak parking demand will be 195 spaces. The peak parking requirements of SMHW are summarized in Table V-3.

TABLE V-3
PROPOSED PEAK PARKING DEMAND REQUIREMENTS
ST. MARGARET'S HOSPITAL FOR WOMEN

Time	Parking Spaces Required
7:00 AM - 8:00 AM	101
10:00 AM - 11:00 AM	195
11:00 AM - 12:00 Noon	186
3:00 PM - 4:00 PM	195
4:00 PM - 5:00 PM	128

In conjunction with the SMHW project, a garage will be built to accommodate 330 vehicles. An analysis of the proposed and available parking was performed to determine if there is enough parking to meet the peak demands of SMHW and the MOB. This analysis is summarized in Table V-4.

All employees of SEH are required to sign an affidavit stating they will not park on neighborhood streets. There are some employees and patients of the hospital who live in Brighton and have resident parking stickers and therefore park on the streets. All employees of the new SMHW will also be required to sign an affidavit stating they will not park on neighborhood streets. Adequate parking will be provided on-site or at contracted off-site parking lots at affordable rates. The rates will be structured to allow weekly parking to be substantially cheaper than a non-resident parking violation.

TABLE V-4

PEAK PARKING SPACE SUPPLY AND DEMAND
AFTER RELOCATION OF ST. MARGARET'S HOSPITAL
TO ST. ELIZABETH'S HOSPITAL CAMPUS

Time	Total Spaces Required	Total Spaces Available	Location	Surplus/ Shortage
7 AM - 8 AM	202	330	- New Garage	+ 128
		0*	- SEH Foundation Lot	
		0*	- Existing Garage	
		330		
10 AM - 11 AM	411	330	- New Garage	+ 112
		103	- SEH Foundation Lot	
		90	- Existing Garage	
		523		
11 AM - 12 Noon	439	330	- New Garage	+ 84
		103	- SEH Foundation Lot	
		90	- Existing Garage	
		523		
3 PM - 4 PM	424	330	- New Garage	+ 150
		128	- SEH Foundation Lot	
		116	- Existing Garage	
		574		
4 PM - 5 PM	353	330	- New Garage	+ 224
		128	- SEH Foundation Lot	
		119	- Existing Garage	
		577		

* Estimated Available Parking.

130 St. Margaret's spaces and 200 Medical Office Building spaces are located in the proposed 330-space Garage.

6.0 FUTURE TRAFFIC CONDITIONS

6.1 Local Traffic Growth

Traffic volumes in the vicinity of the site were projected to future years to reflect the proposed Build year for SMHW. The completion date of the proposed relocation is early 1993.

To develop traffic volumes for these design year, area traffic growth was estimated from available historical count data. Based on previous studies in the area an annual increase of 2.5 percent was found to be very conservative and representative of the area. This compares to a rate of 1.0 percent calculated by VHB. As will be noted later, mitigation measures to be implemented may not be necessary if this growth rates does not occur.

Based on these analyses, there will be sufficient parking available on site utilizing the existing and proposed parking facilities.

6.2 1992 Projected Traffic Volumes

The 1989 existing AM and PM peak hour traffic volumes have been adjusted to incorporate the new access/egress drive on Washington Street (see Figures III-8 and III-9). These traffic volumes were increased to reflect 1992 volumes using the conservative 2.5 percent per year (10.4 percent total increase) growth rate established previously plus the rerouted traffic volumes utilizing the MOB. Traffic volumes associated with the MOB during the AM and PM peak hours of the adjacent roadways was determined and assigned to the local roadway network utilzing the directional distribution determined by VHB and BC&A. The traffic to and from the MOB during the peak hours is shown in Figure VI-1.

The projected 1992 traffic volumes were then combined with the traffic volumes associated with the Medical Office Building to develop 1992 No-Build traffic volumes. The peak hour volumes are summarized in Figures VI-2 and VI-3.

Peak hour traffic volumes associated with SMHW were distributed onto the study area roadways. Based on other studies done for similar uses it was determined that approximately 70 percent of the peak hour trips to the hospital were employee related and will follow the distribution for employees as determined earlier. The remaining 30 percent of the peak hour trips are patients, visitors and deliveries which will follow the existing travel patterns and the distribution for the MOB developed by VHB and refined by BC&A.

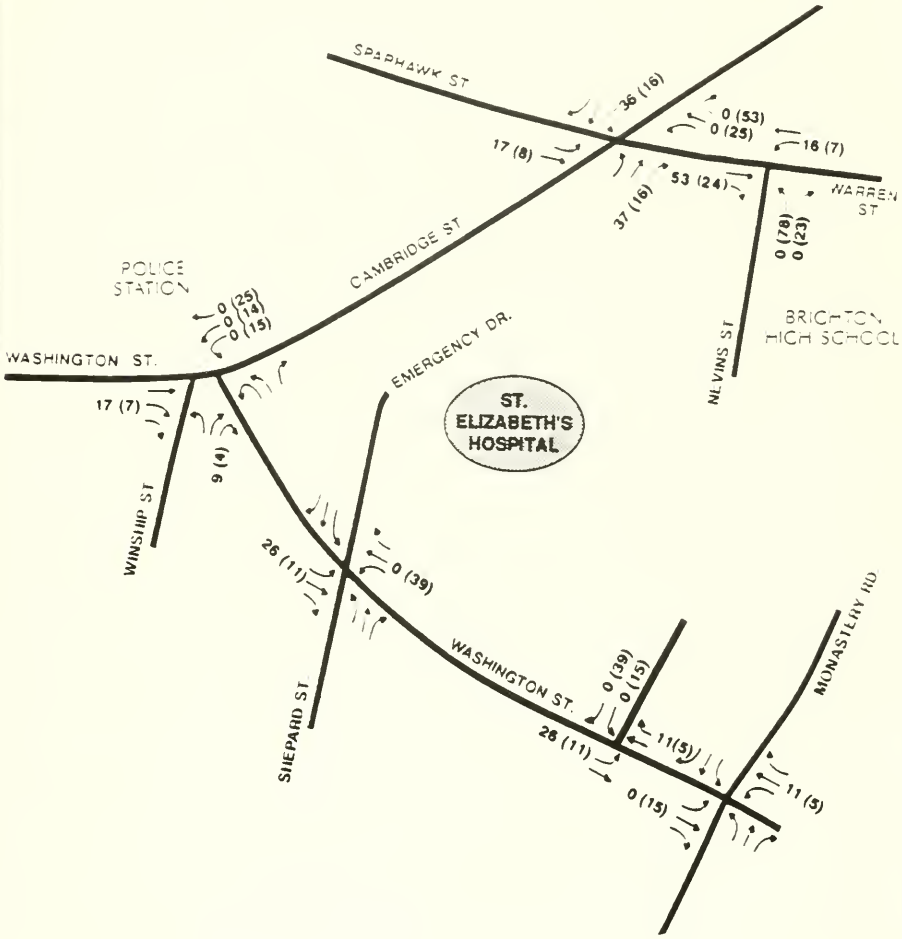

FIGURE VI-1
ADDITIONAL PEAK HOUR TURNING MOVEMENTS DUE TO
ST. MARGARET'S HOSPITAL FOR WOMEN

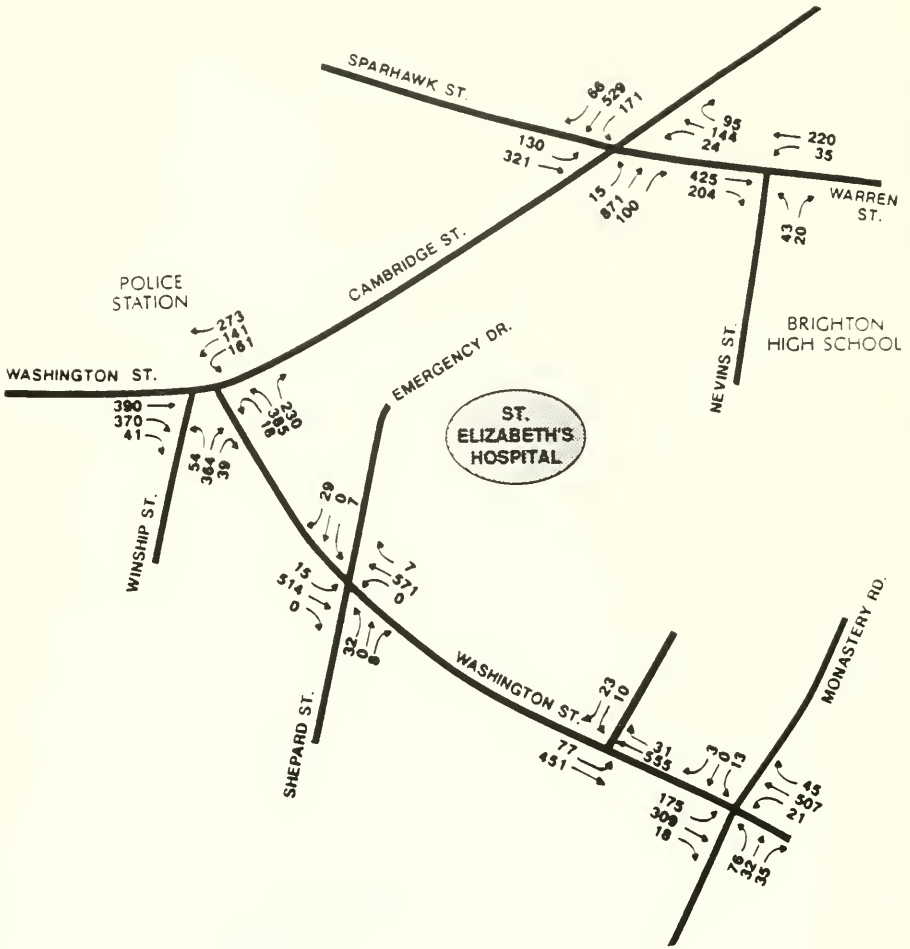

FIGURE VI-2
1992 AM PEAK HOUR TURNING MOVEMENTS - NO-BUILD

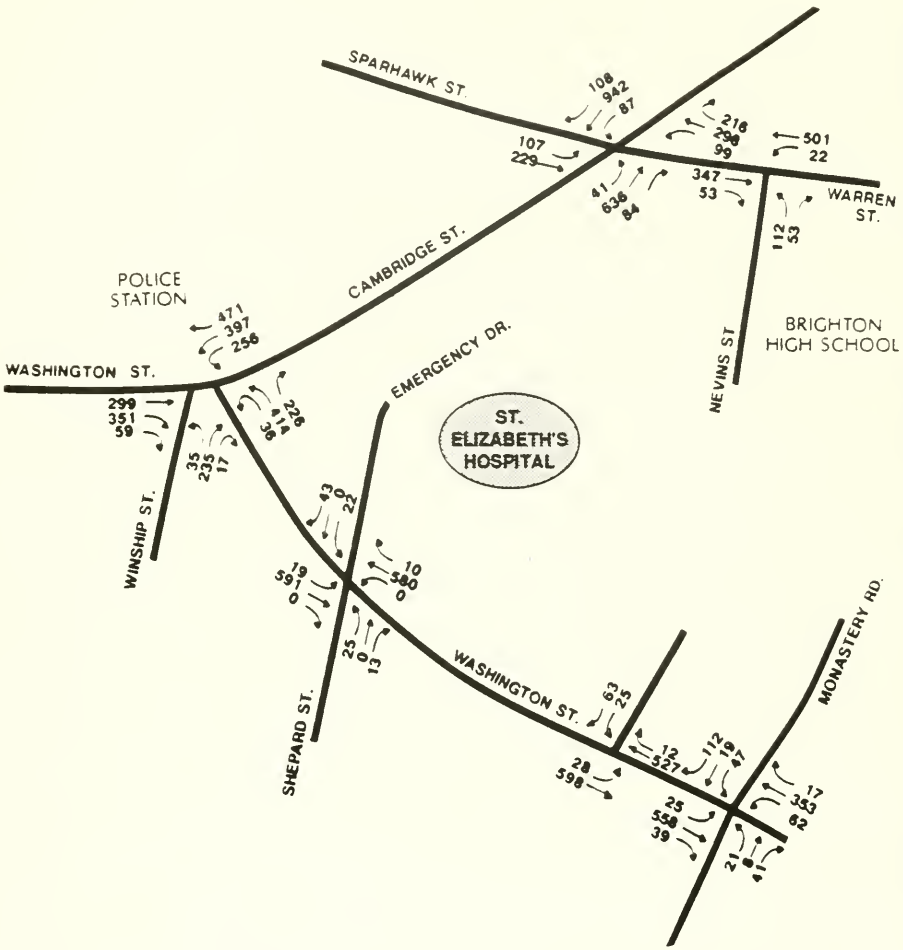

FIGURE VI-3
1992 PM PEAK HOUR TURNING MOVEMENTS - NO-BUILD

The new peak hour trips associated with SMHW are summarized in Figure VI-4. The 1992 Build volumes were then developed by adding the 1992 No-Build volumes to the new trips associated with the St. Margaret's Hospital. The peak hour turning movements for AM and PM peak Build conditions are summarized in Figures VI-5 and VI-6.

A summary indicating the increase in traffic volumes due to SMHW was prepared and is shown as follows:

PEAK HOUR TRAFFIC VOLUMES DUE TO
ST. MARGARET'S HOSPITAL FOR WOMEN

Intersection	Total Traffic Volume 1992 Build		Volume Due to SMHW		Percent Due to SMHW	
	AM	PM	AM	PM	AM	PM
Cambridge/Sparhawk/ Warren Streets	2,506	2,889	40	42	1.6	1.5
Warren/Nevins Streets	1,002	1,176	55	58	5.5	4.9
Cambridge/Washington/ Winship Streets	2,492	2,805	26	28	1.0	1.0
Washington/Shepard Sts./ Emergency Drive	1,207	1,331	26	28	2.1	2.1
Washington St./ Monastery Rd.	1,352	1,323	19	21	1.4	1.6

As shown above, about two percent of traffic entering the majority of intersections is due to SMHW. The only intersection where SMHW traffic is more than two percent of the total expected volumes is at the Warren Street/Nevins Street intersection. This intersection is one of two entry points into the site.

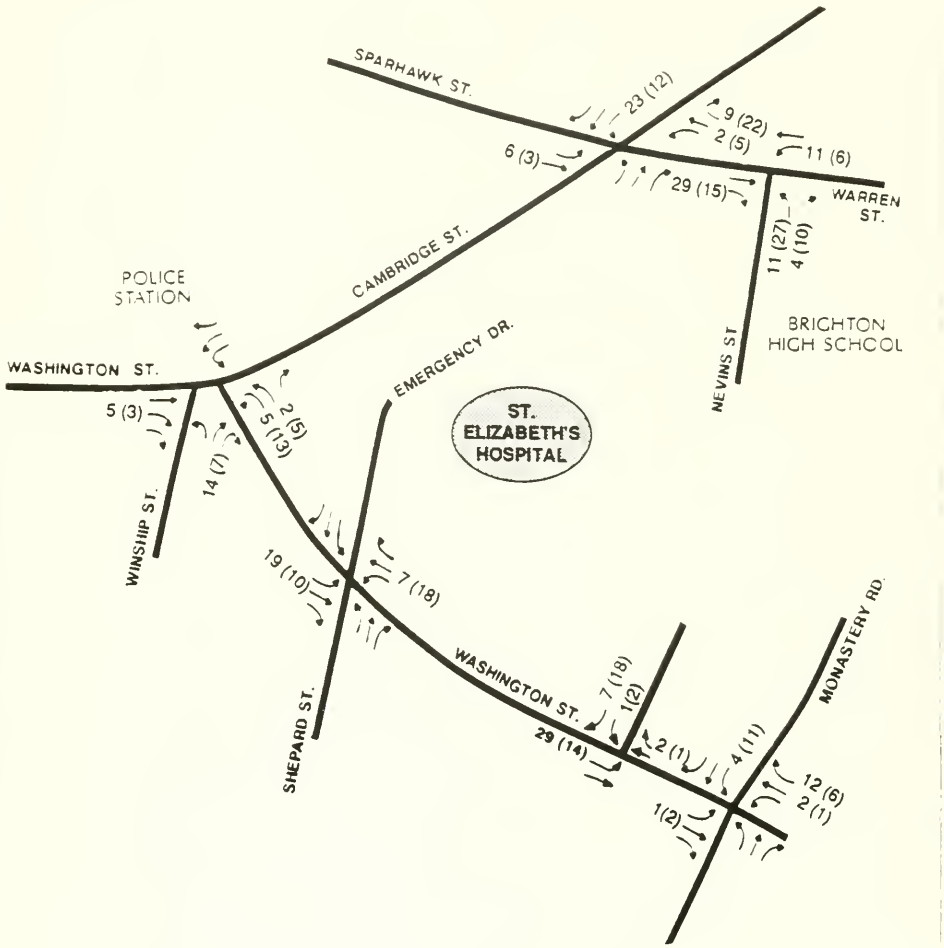

FIGURE VI-4
ADDITIONAL PEAK HOUR TURNING MOVEMENTS DUE TO
ST. MARGARET'S HOSPITAL FOR WOMEN

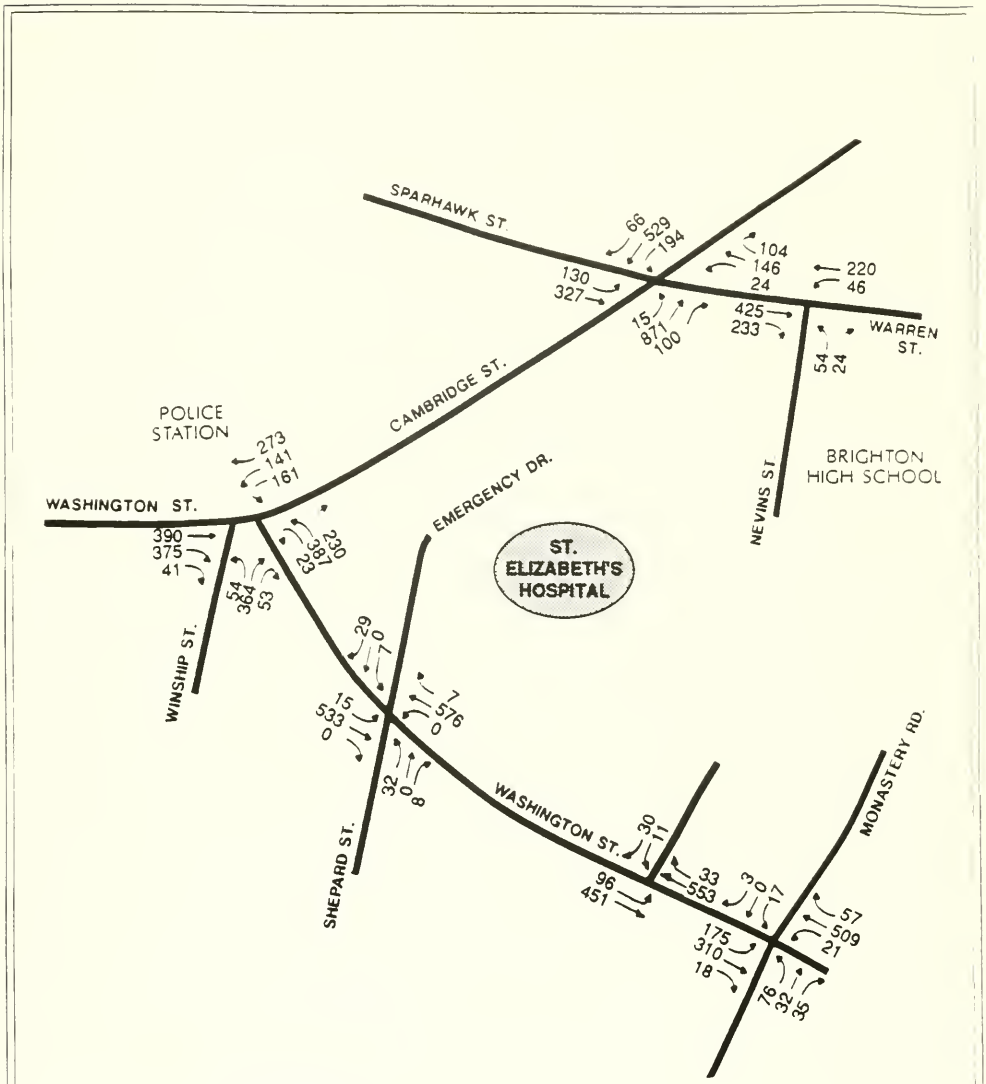

FIGURE VI-5
1992 AM PEAK HOUR TURNING MOVEMENTS - BUILD

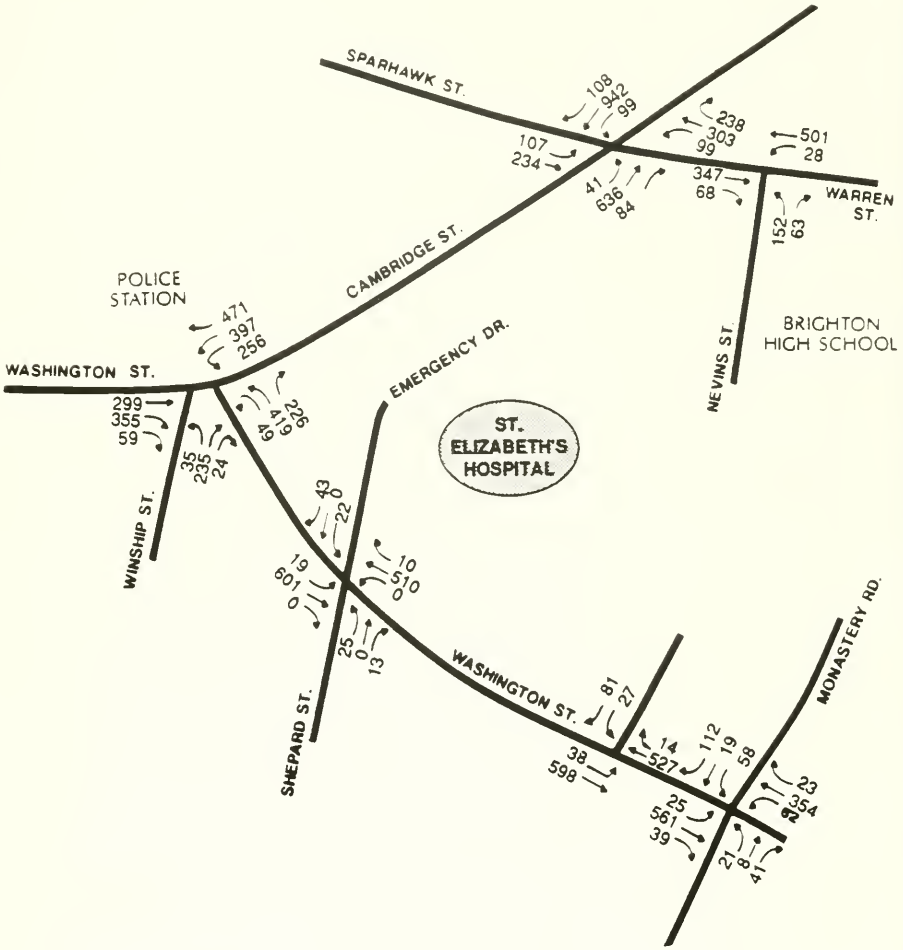

FIGURE VI-6
1992 PM PEAK HOUR TURNING MOVEMENTS - BUILD

6.3 1992 Level of Service Summary

Level of service analyses were performed for the 1992 No-Build and Build volumes assuming no mitigation measures have been made to improve traffic conditions due to the growth of the area. The 1992 No-Build and Build level of service analysis results are summarized in Table VI-1 and VI-2, respectively.

The Cambridge Street/Warren Street/Sparhawk Street intersection will operate at an overall LOS C for both the AM and PM peak hours with only the background traffic (2.5 percent per year growth and MOB traffic) added to the intersection (1992 No-Build). The additional traffic from St. Margaret's Hospital can easily be accommodated. Traffic operations at this intersection will be at an overall LOS C during the AM and PM peak hours for the 1992 Build conditions.

The Cambridge Street/Washington Street/Winship Street intersection will operate at an overall LOS D during both the AM and PM peaks for 1992 No-Build condition. The average overall stopped delay will be 39 seconds for the AM peak hour and 35 seconds for the PM peak hour. The additional traffic at this intersection can be handled with only minor modifications to the raised channelization islands. With these improvements, the expected level of service will be improved to LOS D in the AM and the overall delays will be decreased by approximately 10 seconds in the AM peak and 11 seconds in the PM peak. The intersection would operate at LOS E during the AM peak and LOS D during the PM peak without the minor changes listed in the mitigation section of the report.

At the Nevins Street/Warren Street intersection, the left turn movements (the majority of vehicles are associated with either SMHW or SEH) will operate at LOS B during the AM peak hour and LOS D during the PM peak hour for the No-Build conditions.

The provision for an additional access/egress point (Washington Street/Nevins Street intersection) will improve operations at this intersection. Left turns from Nevins Street will operate at LOS C during the AM peak hour and LOS D during the PM peak hour.

At the Washington Street/Nevins Street intersection, all movements will operate at LOS C or better for all conditions.

The Washington Street/St. Elizabeth's Emergency Drive/Shepard Street intersection will experience minor increases in delay and all movements from the minor approaches will operate at acceptable levels of service (LOS D or LOS D/E).

TABLE VI-1

1992 NO-BUILD LEVEL OF SERVICE

UNSIGNALIZED INTERSECTION	AM LOS	AM Delay	AM ARC	PM LOS	PM Delay	PM ARC
Nevins Street/Warren Street						
NB Warren Street LT	A	5.73	628	A	4.28	841
NB Nevins Street LT-RT	B	11.47	314	D	21.39	168
Washington Street/ Emergency Drive/Shepard St.						
EB Washington Street LT	A	6.11	590	A	6.28	573
NB Shepard Street LT-TH-RT	D	31.09	116	D	34.29	105
SB Emeregency Drive LT-RT	B	10.60	340	B	20.18	178
Washington/Nevins Street						
EB Washington Street LT	A	5.88	613	A	5.07	710
SB Nevins Street LT-RT	B	11.55	312	C	14.53	248
SIGNALIZED INTERSECTION	**LOS**	**Delay**	**V/C**	**LOS**	**Delay**	**V/C**
Cambridge Street/Warren Street/ Sparhawk Street	C	20.33	0.93	C	17.35	0.88
EB Cambridge Street LT-TH-RT	C	19.20	0.93	B	10.06	0.74
WB Cambridge Street LT-TH-RT	C	17.37	0.86	C	16.93	0.88
NB Warren Street LT-TH	B	13.66	0.38	C	23.33	0.79
NB Warren Street RT	B	12.82	0.20	B	14.78	0.40
SB Sparhawk Street LT-TH	D	32.30	0.93	D	30.75	0.87
Cambridge Street/Washington Street/ Winship Street	D	38.89	1.09	D	35.95	1.07
EB Washington Street LT	D	31.83	0.86	C	24.70	0.67
EB Washington Street TH-RT	E	47.80	1.03	E	57.06	1.06
WB Washington Street LT-TH	E	52.58	1.03	E	59.51	1.06
WB Washington Street RT	C	19.82	0.66	C	19.11	0.59
NB Winship Street LT-TH-RT	D	37.46	0.96	D	30.71	0.85
SB Cambridge Street LT	F	116.03	1.21	F	74.13	1.10
SB Cambridge Street TH	B	10.22	0.29	C	21.73	0.81
SB Cambridge Street RT	A	3.10	0.31	A	4.68	0.54
Washington Street/Monastery Road	B	13.41	0.79	B	7.25	0.64
EB Washington Street LT-TH-RT	C	22.24	0.92	B	6.37	0.67
WB Washington Street LT-TH-RT	B	6.02	0.64	B	5.06	0.56
NB Monastery Road LT-TH-RT	B	12.32	0.46	B	11.59	0.22
SB Monastery Road LT-TH-RT	B	11.12	0.05	B	13.93	0.57

LOS - Level of Service
Delay - Average seconds of delay per vehicle
ARC - Available Reserve Capacity
V/C - Volume/Capacity Ratio

LT - Left
TH - Through
RT - Right

TABLE VI-2
1992 BUILD LEVEL OF SERVICE

UNSIGNALIZED INTERSECTION	AM LOS	AM Delay	AM ARC	PM LOS	PM Delay	PM ARC
Nevins Street/Warren Street						
NB Warren Street LT	A	6.08	592	A	4.39	820
NB Nevins Street LT-RT	C	12.99	277	D	31.29	115
Washington/Emergency Drive/Shepard St.						
EB Washington Street LT	A	6.16	584	A	6.43	560
NB Shepard St. LT-TH-RT	D	33.38	108	E	37.43	96
SB Emergency Drive LT-RT	B	10.96	329	D	21.75	166
Washington Street/Nevins St.						
EB Washington Street LT	A	6.13	588	A	5.17	697
SB Nevins Street LT-RT	B	11.76	306	C	15.28	236
SIGNALIZED INTERSECTION	**LOS**	**Delay**	**V/C**	**LOS**	**Delay**	**V/C**
Cambridge/Warren/Sparhawk	C	24.70	0.99	C	18.62	0.91
EB Cambridge St. LT-TH-RT	D	26.18	0.99	B	10.02	0.74
WB Cambridge St. LT-TH-RT	C	16.65	0.86	C	18.18	0.91
NB Warren Street LT-TH	B	14.35	0.41	D	25.11	0.82
NB Warren Street RT	B	13.47	0.22	C	15.23	0.45
SB Sparhawk Street LT-TH	E	42.32	0.99	D	35.18	0.91
Cambridge/Washington/Winship	E	42.57	1.13	D	38.63	1.09
EB Washington Street LT	D	32.70	0.86	D	25.73	0.69
EB Washington St. TH-RT	E	52.52	1.05	F	66.23	1.09
WB Washington St. LT-TH	E	57.09	1.05	F	67.73	1.09
WB Washington St. RT	C	19.87	0.66	C	18.88	0.59
NB Winship St. LT-TH-RT	E	40.97	0.98	D	29.88	0.84
SB Cambridge Street LT	F	136.27	1.28	F	73.48	1.09
SB Cambridge Street TH	B	10.14	0.29	C	20.78	0.80
SB Cambridge Street RT	A	3.09	0.31	A	4.76	0.54
Washington/Monastery Road	B	7.63	0.75	B	8.81	0.72
EB Washington St. LT-TH-RT	B	7.03	0.75	B	7.21	0.72
WB Washington St. LT-TH-RT	A	3.34	0.57	B	5.42	0.61
NB Monastery Road LT-TH-RT	D	26.42	0.75	B	12.24	0.27
SB Monastery Road LT-TH-RT	B	14.07	0.10	C	20.71	0.72

LOS - Level of Service
Delay - Average seconds of delay per vehicle
ARC - Available Reserve Capacity
V/C - Volume/Capacity Ratio

LT - Left
TH - Through
RT - Right

7.0 MITIGATION MEASURES

To mitigate the impacts of the assumed 2.5 percent annual increase in traffic as well as the relocated St. Margaret's Hospital traffic, minor improvements are necessary at the Cambridge Street/Washington Street/Winship Street intersection only. The reduced project will have less impact on this intersection, however, the reduction in traffic (about 30%) during the peak hour will not change traffic operations significantly. The new access improves operations at a number of intersections, helping minimize required mitigation. Traffic from SMHW Hospital will have minimal effects at the other study area intersections and projected 1992 No-Build levels of service will be slightly affected. The analysis of this intersection without and with mitigation is shown in Table VII-1.

The improvements necessary to ameliorate the levels of service experienced at the Cambridge Street/Washington Street/Winship Street intersection are very minor. The improvements allow left turn movements from Washington Street westbound onto Washington Street from both lanes. This can be accomplished with pavement markings (arrows and legends), the removal of signs and minor modifications to the raised channelization islands. These improvements are shown in Figure VII-1.

Improvements at the Nevins Street/Warren Street intersection include the striping of Nevins Street for three lanes (two outbound; one right turn only, one left turn only), and signing (stop and right [left] lane must turn right [left]).

Improvements at the Cambridge/Warren/Spawhawk Streets intersection include restriping Warren Street to separate left-turning from through traffic, restriping Cambridge Street westbound to allow a left-turn lane and two through lanes, and restricting peak hour parking near the intersection. These improvements are shown in Figure VII-2.

Intersection improvements, proposed to increase capacity and improve traffic operations, are one method of mitigating project related traffic impacts. Reducing the demand for automobile use and the amount of traffic generated is another effective alternative. The intersection improvements will therefore be more efficiently used if demand reduction strategies are employed. Demand reduction strategies include transit usage, ridesharing or van pooling and alternative work schedule.

TABLE VII-1
1992 BUILD LEVEL OF SERVICE
WITHOUT AND WITH MITIGATION

UNSIGNALIZED INTERSECTION	AM LOS	AM Delay	AM ARC	PM LOS	PM Delay	PM ARC
Cambridge Street/Washington Street/ Winship Street						
WITHOUT MITIGATION	E	42.57	1.13	D	38.63	1.09
EB Washington Street LT	D	32.70	0.86	D	25.73	0.69
EB Washington Street TH-RT	E	52.52	1.05	F	66.23	1.09
WB Washington Street LT-TH	E	57.09	1.05	F	67.73	1.09
WB Washington Street RT	C	19.87	0.66	C	18.88	0.59
NB Winship Street LT-TH-RT	E	40.97	0.98	D	29.88	0.84
SB Cambridge Street LT	F	136.27	1.28	F	73.48	1.09
SB Cambridge Street TH	B	10.14	0.29	C	20.78	0.80
SB Cambridge Street RT	A	3.09	0.31	A	4.76	0.54
WITH MITIGATION	D	32.36	1.03	D	27.46	0.98
EB Washington Street LT	D	25.19	0.78	C	21.89	0.62
EB Washington Street TH-RT	D	33.05	0.95	D	39.97	0.98
WB Washington Street LT-TH	D	34.04	0.95	D	39.51	0.98
NB Winship Street LT-TH-RT	D	35.50	0.95	C	22.83	0.75
SB Cambridge Street LT	F	102.06	1.17	E	45.07	0.97
SB Cambridge Street TH	B	9.85	0.28	C	17.18	0.74
SB Cambridge Street RT	A	2.46	0.29	A	3.35	0.50

LOS - Level of Service
Delay - Average seconds of delay per vehicle
ARC - Available Reserve Capacity
V/C - Volume/Capacity Ratio

LT - Left
TH - Through
RT - Right

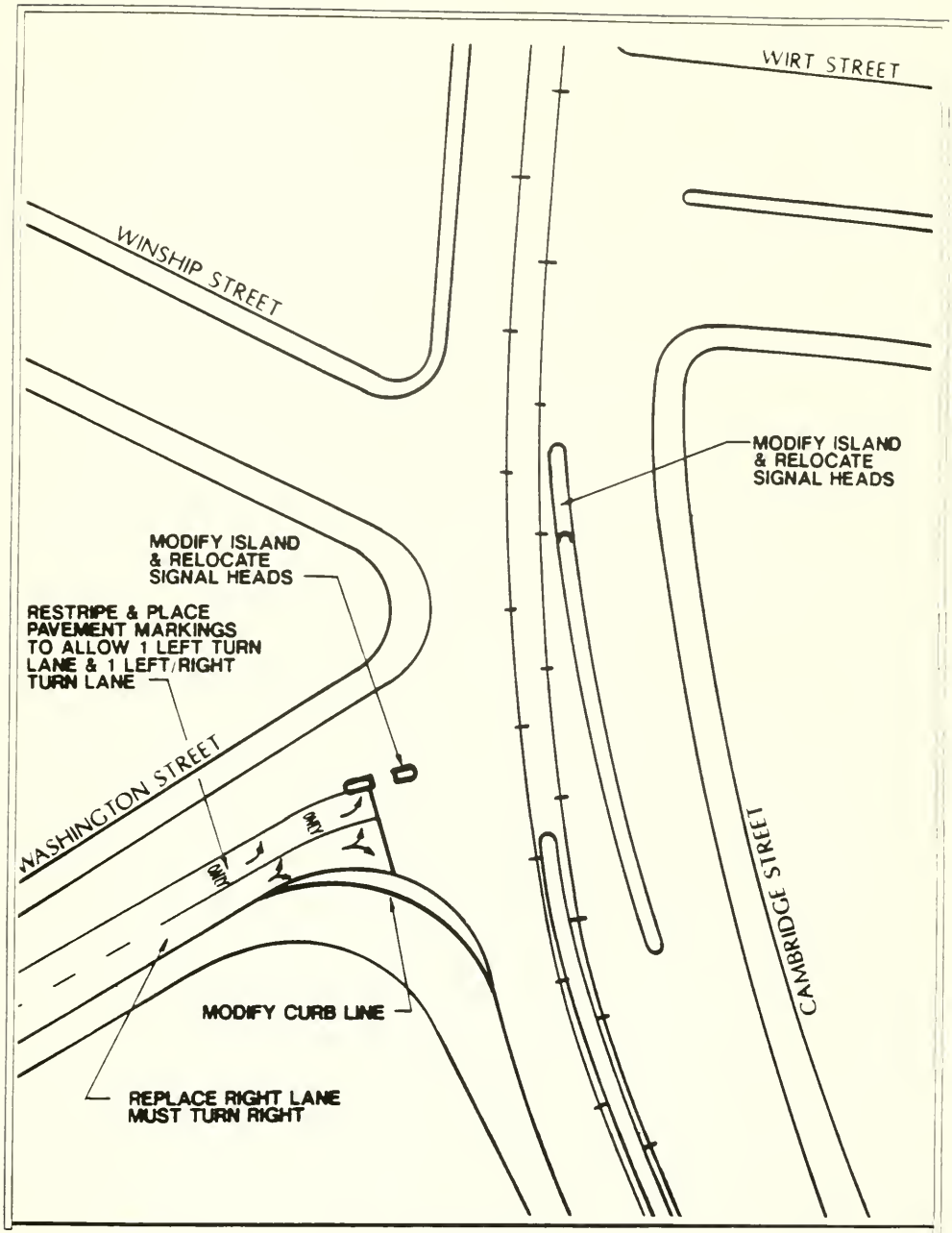

FIGURE VII-1
CONCEPTUAL IMPROVEMENTS AT CAMBRIDGE, WASHINGTON, AND WINSHIP STREETS

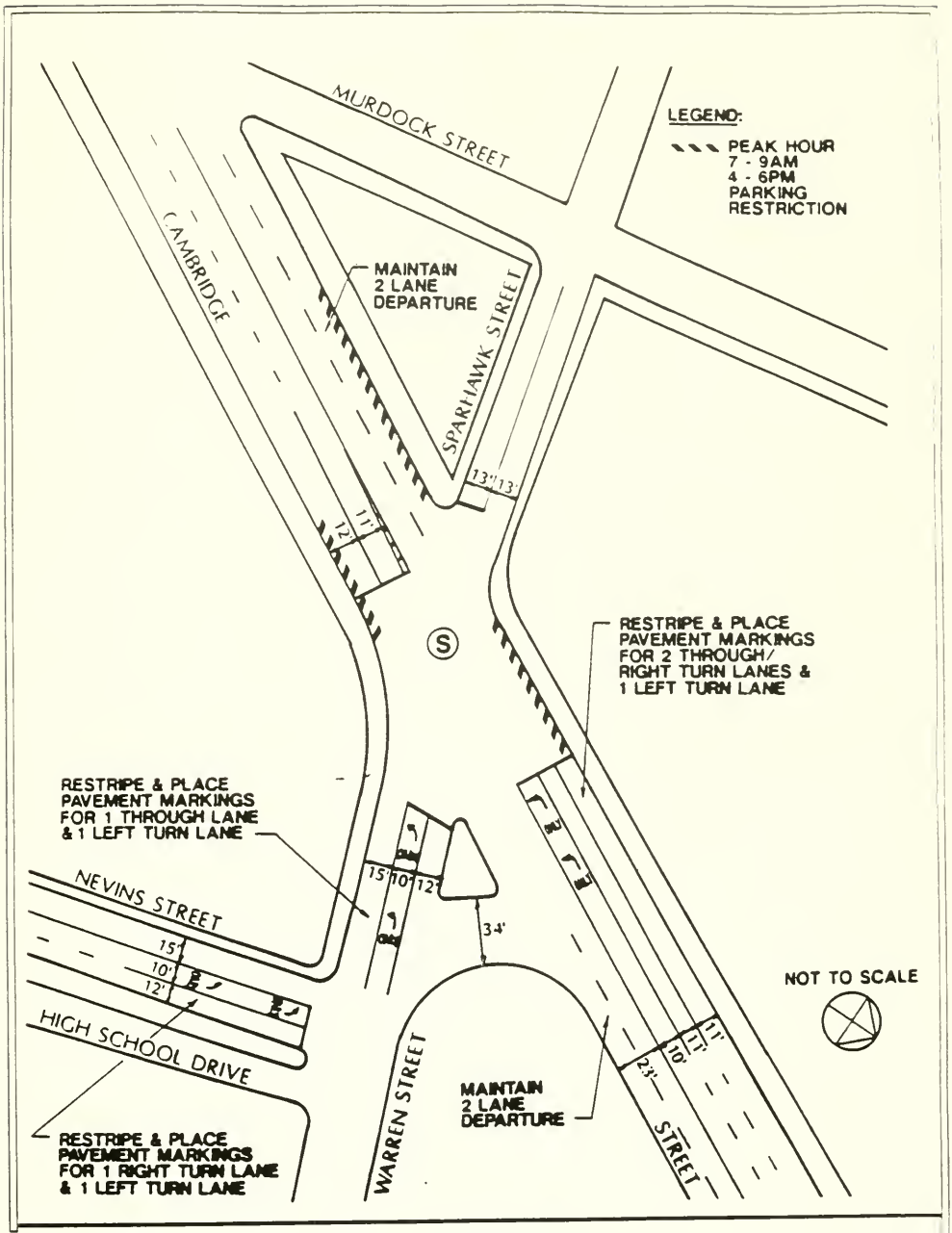

FIGURE VII-2
CONCEPTUAL IMPROVEMENTS AT CAMBRIDGE, WARREN & SPARHAWK STREETS

St. Elizabeth's Hospital campus is accessible from two bus lines in the area and the Green line is within a one-half mile walk. The use of public transportation is expected to be higher than estimated in the trip generation section of this report making the traffic related impacts less.

Ridesharing is another demand reduction measure and encourages commuters to ride with other commuters rather than alone. Common ridesharing programs include car pooling and van pooling. Ridesharing will also be promoted through parking pricing and supply management strategies. Rate structuring will encourage carpooling among employees who drive to the site. A small pool of spaces will also be reserved for carpools and vanpools. With ridesharing measures in place, vehicle occupancies are expected to be higher and the number of new trips into the study area will be less.

A shuttle service will be available from early morning through the evening peak hour between the existing site in Dorchester and the SEH campus. This will allow employees to continue to park in Dorchester and shuttle to Brighton and therefore reduce the total traffic accessing the site during the peak hours. The shuttle service will also be available during the day for patients and visitors to minimize the total daily traffic accessing the site.

This higher use of public transportation is expected to occur because of the provision of the shuttle van stopping at the Warren Street and Washington Street stops of the MBTA Green Line train and the provision of on-site sales of MBTA passes.

Alternative work schedules also offer peak hour demand reduction by spreading trips over a longer period. This will reduce demands on the roadway network. SMHW's starting time will be earlier than 8:00 AM; ending times will be before 4:00 PM. This will allow traffic generated by the site to come into or leave the area before the adjacent roadway peak hours.

The project proponent will fund and operate the shuttle service between the existing facility and the SEH campus, will fund the minor improvements necessary at the Cambridge Street/Washington Street/Winship Street intersection, and will fund the extension of Nevins Street to Washington Street providing a new access/egress. All mitigation measures should be in place before the opening of the new facility at the SEH campus.

8.0 INTERNAL CIRCULATION

SMHW and SEH will provide sufficient off-street loading/unloading space for all delivery vehicles, including bicycle messengers and minimize the amount of on-street loading and unloading activities. Access to the loading area will be from Nevins Street. Sufficient room for truck maneuvering will be provided internally and no stopping or backing will be necessary on-street to accommodate trucks.

SMHW will encourage all delivery vehicles (with the exception of courier services) to use off-peak hours, which include all times other than 7:00 AM - 10:00 AM and 3:00 PM - 6:00 PM weekdays. Off-street loading/unloading facilities will be available by appointment to encourage off-hour deliveries.

Off-street deliveries to the buildings will be prohibited from any location other than the loading dock. No deliveries will be accepted through the main entrances to the buildings. These measures will reduce turnover time of delivery vehicles (on-site security officers will supervise delivery activity) and improve security for delivery services.

The initial work to be done on the St. Margaret's Hospital project will consist of the demolition of one building. (Current on-site parking facilities and circulation are shown in Figure VIII-1.)

The parking that will be displaced by construction staging during the construction of the garage will be provided off-site (as currently being proposed by SEH). Approximately 21 spaces will be lost on-site during construction; however, SEH will provide spaces off-site for employees that will be available before commencement of construction. Patient and visitor parking will be maintained on-site.

The 330-space garage will be completed before completion of the hospital building. At that time, the garage will be used so that employees who were parking offsite during construction can return to park on the campus. However, the temporary off-site parking currently being negotiated by SEH will be maintained to offset the loss of parking on-site due to the construction of the hospital facility. On-site parking facilities and circulation during the construction of SMHW is shown in Figure VIII-2. As shown, only internal vehicle and pedestrian circulation patterns will be altered. Access for delivery vehicles and fire apparatus will be maintained through the site during construction. Walkways for pedestrians accessing the buildings from the SEH Foundation lot will be clearly defined and maintained during construction.

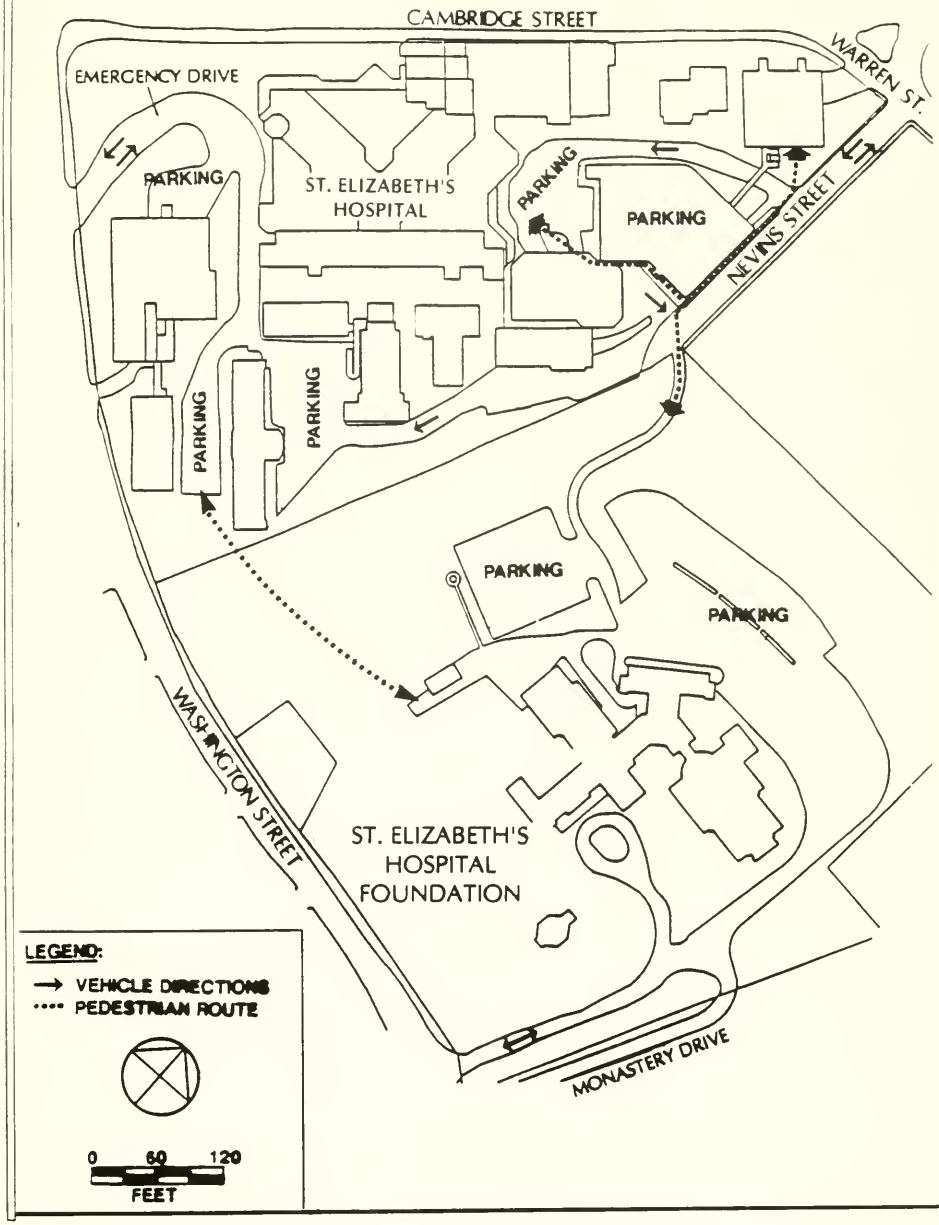

FIGURE VIII-1
EXISTING INTERNAL CIRCULATION

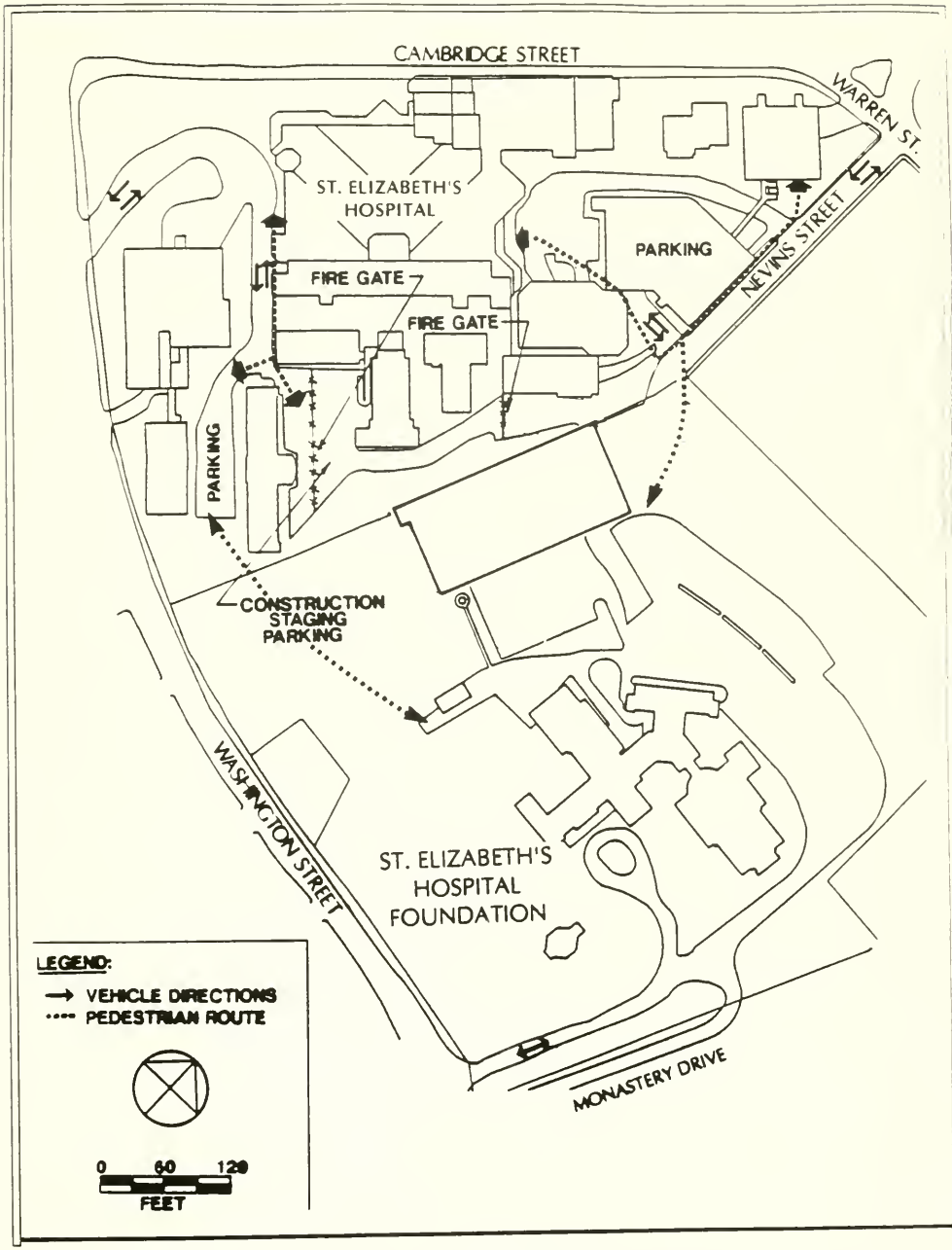

FIGURE VIII-2
INTERNAL CIRCULATION DURING CONSTRUCTION OF SMHW FACILITY

The availability of on-site and off-site parking for construction workers will alleviate any impacts the local neighborhood may encounter. The average workday for construction will begin at 7:00 AM and end by 3:30 PM. All construction worker traffic will arrive at the site well in advance of the AM peak hour and depart before the PM peak hour on the adjacent roadway network; therefore, construction worker traffic impacts will be minimized.

The proposed circulation patterns at the site will not vary significantly from the the existing patterns. The proposed garage entrance will be located on the northerly corner of the proposed garage. Access to and from the garage will be from Nevins Street to Washington Street on the newly constructed access/egress and to Warren Street. The additional access/egress will improve traffic operations at the Warren Street/Nevins Street intersection. Traffic exiting the site at the Warren Street/Nevins Street intersection will not interfere with this entrance location. A queueing analysis was performed to determine the maximum queue lengths that will occur at this intersection if it remains unchanged. This analysis indicated that the average queue length at the intersection on the Nevins Street approach will be less than one vehicle and the maximum queue length would be 10 vehicles or about 200 feet. The entrance/exit to the existing garage is about 400 feet away from this intersection and the proposed garage entrance/exit is 600 feet away.

The main entrance to the proposed SMHW will be through the existing SEH main entry. Pedestrian crosswalks from the garage and SEH Foundation lots across Nevins Street will be provided, delineating clear pedestrian paths. The proposed circulation patterns are shown in Figure X-1.

9.0 FUTURE MONITORING PROGRAM

After the completion of the proposed SMHW at the St. Elizabeth's campus in Brighton, the proponent will undertake a program to monitor traffic accessing and egressing the site. The monitoring program will include the following:

- o Peak hour turning movements at site drives to ensure traffic projections are accurate.

- o Employee surveys to determine:
  - Mode of travel (auto, cab, bus, train, walk, or shuttle).
  - Times of arrival and departure.
  - Location of parking facility used.

- o Patient/visitor surveys:
  - Mode of travel.
  - Times of arrival/departure.
  - Location of parking facility used.

In addition to these actual monitoring programs, SMHW will also help reduce vehicular traffic during both the peak hours and daily by promoting transit usage with on-site MBTA pass sales.

SMHW will also promote MBTA usage through literature distributed on-site which details the accessibility of the hospital via train and bus. The hospital will indicate locations of MBTA and bus stops and the ease of accessing the hospital via these alternate methods in literature prepared for the hospital.

A shuttle service will also be available for workers, visitors, and patients from the Dorchester site to the new facility. The shuttle will operate from early morning through the evening peak and will also stop at a designated location near the Green Line, either on Warren Street or Washington Street, and will pick up persons with destinations at St. Elizabeth's or St. Margaret's. The location of the stop will be designated by signage at either location. For patients unable to use the shuttle system, a cab voucher system will be implemented.

10.0 CONCLUSIONS AND RECOMMENDATIONS

The relocation of SMHW will have minor impacts on the roadway and parking networks adjacent to the site. Capacity analyses performed for the 1992 No-Build (SMHW relocation date) condition, indicate that traffic operations at the intersections will be impacted by the local growth of the area (2.5 percent traffic increase per year plus SEH MOB currently under construction). Most study area intersections will operate at an overall LOS C or D during the AM and PM peak hours.

The addition of traffic from SMHW will have minor impacts on the intersections of Nevins Street/Warren Street, Washington Street/Monastery Road, and Cambridge Street/Warren Street/Sparhawk Street and Cambridge Street/Washington Street/Winship Street.

The greatest impacts at the Nevins Street/Warren Street intersection will occur during the PM peak. Left-turning vehicles from Nevins Street to Warren Street will operate at LOS D with the new access and is considered acceptable for vehicles from a minor street making a left turn onto a major roadway. Minor improvements include pavement markings and signing as recommended in the VHB report prepared for the MOB.

The impacts at the Washington Street/Monastery Road intersection will be very minor and the overall level of service will change from LOS B to LOS C with only a slight increase in vehicle delay (approximately two seconds).

At the Cambridge Street/Warren Street/Sparhawk Street intersection the overall traffic operations will remain at LOS C with delays increasing only 1 to 4 seconds.

The Cambridge Street/Washington Street/Winship Street intersection will change to LOS E during the AM peak and remain at LOS D during the PM peak. To improve traffic operations at this intersection, minor improvements are recommended. The improvements include geometric changes to the raised channelization island, removal of the Right Lane Must Turn Right sign and the placement of pavement arrows and legends on the Washington Street westbound approach. This would allow left turns from both lanes onto Washington Street and Winship Street. The raised channelization island on Cambridge Street would also have to be modified to facilitate turning vehicles. With the recommended improvements, traffic operations will be improved and the intersection will operate at LOS D with delays decreased by approximately 4 seconds when compared to No-Build conditions.

The accident and safety analyses performed indicates there are currently no safety hazards in the study area. Pedestrian traffic in the study area is highest from 7:15 - 8:15 AM and 2:00 - 3:00 PM. This pedestrian traffic is due to both the Brighton High Street and William Howard Taft Junior High School and is concurrent with only the AM peak vehicular traffic. SMHW-generated traffic will not introduce any new safety hazards.

The facility will generate 100 new trips during the AM peak, 55 of which will pass through the Warren Street/Nevins Street intersection. Of the remaining 45 vehicles, 16 will enter and exit at the Washington Street/Monastery Road intersection, and 29 will enter and exit at the new access/egress road to Washington Street.

During the AM peak the result will be a net reduction of traffic at the Warren/Nevins intersection and the relocated SMHW will minimally affect traffic operations at this intersection.

Internal circulation during construction and after construction will be similar to the existing circulation patterns with the exception of the new access/egress road onto Washington Street. All loading and unloading will be done on-site and traffic on the study area roadways will not be altered. Access for emergency equipment will be maintained at all times during and after construction.

Based on the parking analyses completed, the peak parking overflow from the SMHW garage can be absorbed easily by the other parking facilities on site. Peak parking required for SMHW will be 195 spaces while 130 spaces will be provided in the 330 space garage. Currently, the parking facilities at SEH are not at capacity and parking is available.

The proposed circulation patterns, with the new SMHW facility and garage, is shown in Figure X-1.

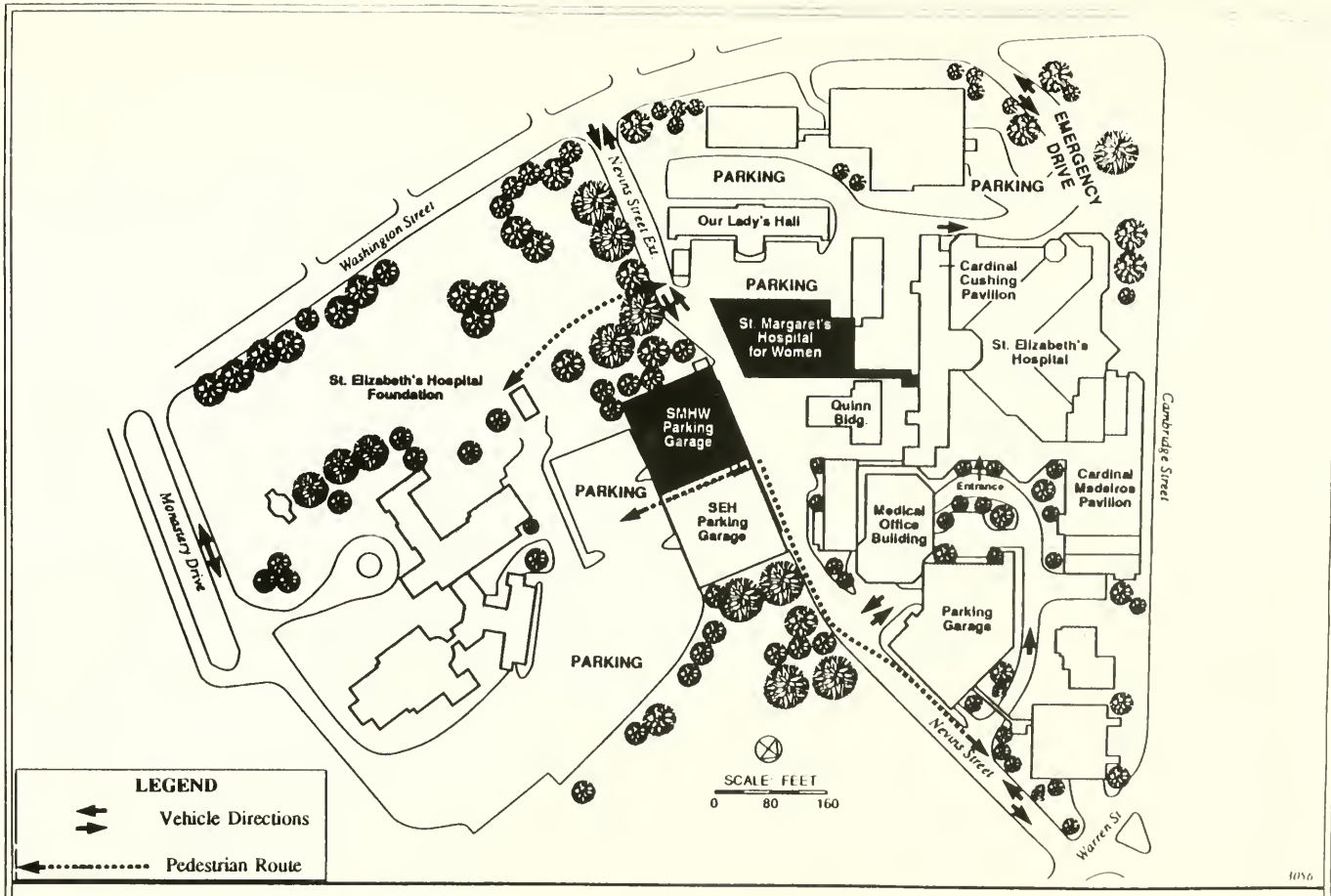

FIGURE X-1
FUTURE INTERNAL CIRCULATION

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